

No. 2203

3

---

United States  
**Circuit Court of Appeals**  
For the Ninth Circuit

---

**Brief of Appellants**

---

MORSE S. DUFFIELD and  
LEWIS A. JEFFS,  
Appellants,  
vs.

SAN FRANCISCO CHEMI-  
CAL COMPANY, a corpor-  
ation,  
Appellee.

---

Upon Appeal from the United States District Court for  
the District of Idaho, Southern Division.

---

A. B. Gough,  
A. L. Hoppaugh,  
C. B. Jack, and  
Charles C. Dey,  
Counsel for Appellants.

---

THE ARROW PRESS, 66 W. SECOND SOUTH, SALT LAKE

**FILED**

JAN 28 1912



No. 2203

---

United States  
Circuit Court of Appeals  
For the Ninth Circuit

---

Brief of Appellants

---

MORSE S. DUFFIELD and  
LEWIS A. JEFFS,  
Appellants,  
vs.

SAN FRANCISCO CHEMI-  
CAL COMPANY, a corpor-  
ation,  
Appellee.

---

Upon Appeal from the United States District Court for  
the District of Idaho, Southern Division.

## STATEMENT OF THE CASE.

This suit was brought pursuant to Sec. 2326, Rev. Stat. of the United States by the appellants (complainants) as owners and in possession of certain lode mining claims known as the "Obey," "Obed," "Jimtown," "Fentress," "Cumberland," "Overton," "Mt. Pleasant," "Arkansas," "Hickman," "Columbia," and "Wayne," against the appellee (defendant) to quiet their title as to the conflict area with appellee's placer mining claims known as the "Wilmington," "Colcock," "Inman," "Winfield," "Winter," "Wonder," "Winslow," and "Wizard."

As to the "Wilmington" placer, no conflict area exists or is now claimed, having been expressly disclaimed in appellants' answer to appellee's cross-bill.

The appellee filed its application for patent on August 11th, 1910, in the United States Land Office at Blackfoot, Idaho.

On October 9th, 1910, during the period of publication, the appellants filed an adverse claim and this suit was brought in due time.

The cause is at issue upon the Amended Bill of Complaint, the Answer thereto, and Appellee's Cross-Bill and Answer thereto, with usual replications.

The facts requisite to establish the rights of the parties respectively to the conflict area have, by the pleadings, undisputed evidence and stipula-

tions of counsel been narrowed down to one controlling question, viz.:

Whether the one and only valuable mineral deposit existing within the exterior boundaries of the said placer and of the said lode locations, the deposit upon which the discovery for both the placer and lode locations respectively is based, can be secured under the Acts of Congress by means of a placer location or by means of a lode location. If it cannot be secured by means of a placer location, the further question may be pressed by appellee, viz.: Whether appellants lawfully initiated their said lode locations within the limits of said placer locations.

The facts substantially without dispute bearing upon those issues briefly stated are as follows:

## 1. LOCATIONS.

In the year 1901, Mr. Glenn and Mr. Brennan filed a coal land declaratory statement in the belief that the deposit was coal. They drove a tunnel, and subsequently, in 1903, sold out to the San Francisco Chemical Co. (Rec. 552-3.)

In 1904-5 the predecessors in interest of the San Francisco Chemical Co. made the placer locations covering this deposit, including the placer claims involved in this case. These claims were transferred to said company, the appellee, in August, 1906. (Rec. 505.)

Each of the placer claims of appellee involved herein comprises 160 acres except the "Winslow" and "Wizard," which have an area of 90.51 and 100.35 acres respectively. (Rec. 31-2, Plaintiff's Exhibit 1 and Defendant's Exhibit 2.)

In 1904, the same year the placer locations were made, one C. C. Jones made lode locations upon this deposit. (Rec. 240.) It does not appear whether the placer or lode locations were prior in time. Litigation followed to which we will hereafter refer. Mr. Jones, prior to any adjudication, abandoned the lode locations. (Rec. 501-2, 119, 156.) There were no lode claims in 1906. (Rec. 648.)

In 1907, Mr. Duffield, one of the appellants, who had since 1902 (Rec. 129) been interested in mines valuable for phosphate, was attracted to the locality of the ground in controversy by an article in the Engineering and Mining Journal by the said Mr. C. C. Jones. (Rec. 134.) Subsequently he looked up the county records, made a map (Rec. 136, 137, 151), and thereupon, with his co-appellant, Mr. Jeffs, in November, 1907, made the lode locations involved here, practically including the same ground as originally included in the old abandoned Jones lode locations. At the time the lode locations were made there was no one on the placer locations or any evidence of work in progress. (Rec. 119, 152-3.)



## 2. TOPOGRAPHY.

The claims are situated in the Pruess range of mountains, Bear Lake County, Idaho. These mountains trend northerly and southerly. Montpelier creek and canyon deploys southwesterly between the "Overton" and "Mt. Pleasant" lode claims. All the claims are located on steep and rolling ground. The surface slopes toward Montpelier canyon. The "Obey" is located on the highest ground, and the "Arkansas" and "Hickman" on lower ground.

## 3. MAPS.

In connection with the printed record, there are two maps reproduced, Plaintiffs' (Appellants') Exhibit 1, and Defendant's (Appellee's) Exhibit 2.

Plaintiffs' Exhibit 1 shows in green lines the boundaries of the placer locations and in black lines the boundaries of the lode locations. In addition to the locations involved in this controversy, the following additional placer locations are also shown, viz.: "Waterloo" and "Wilmington." Also additional lode locations, to wit: "<sup>Idaho</sup>~~Hickman~~" and "Maury." Montpelier canyon creek and the prominent outcrops are shown. Black lines indicate tunnels, double or parallel lines indicate cuts. The top of the principal ridge is shown in brown ink, with

hatched lines. The gulches and roads are shown in brown in the conventional way. (Rec. 54-56.)

Defendant's Exhibit 2, was made by Mr. Weeks (leading expert and witness for appellee). It purports to be a duplicate of plaintiffs' Exhibit 1, with the addition of a heavy black line, which Mr. Weeks explains indicates position of main phosphate bed as shown by tunnels, open cuts and natural exposures which he says constitutes "a very natural outcrop." (Rec. 527-529.)

#### 4. CHARACTER OF THE VALUABLE MINERAL DEPOSIT.

The claims contain a valuable mineral deposit commonly known as calcium phosphate, or rock phosphate, and technically as a form of Apatite, called Phosphorite. The valuable mineral is tri-calcium phosphate, a union of calcium, phosphorus and oxygen,  $(\text{CaO})_3\text{P}_2\text{O}_5$  or  $\text{Ca}^3(\text{PO}_4)_2$  (Rec. 253, 431, 437, 438, see tables 695, 697).

Calcium is a metallic, while phosphorus is usually classified as a non-metallic element. (Rec. 438.)

The phosphorus in the ore gives to the deposit its commercial value. (Rec. 339, 253, 431, 404.)



## 5. CHARACTERISTICS OF THE PHOSPHATE DEPOSIT.

The geological formation is sedimentary. Within the ground covered by the placer and lode locations there is a mineral belt or zone of calcium phosphate. The mineralized zone is readily distinguishable from the enclosing wall rocks. It is distinctively different in color, texture and specific gravity. It extends through the ground included in said lode and placer locations from the northerly to the southerly boundaries thereof, and beyond. The dip and strike conform to the stratification of the sedimentary beds. (Rec. 176, 253-5, 274-7, 423-431, 475-6, 520, 762.)

In some places erosion has removed a portion of the hanging wall. Any apparent irregularity in dip and strike is due to the irregularity of the uplifting of the sedimentary beds. Gulches and gulleys cut through the deposit. Possibly rolls and folding of the beds on the strike and on the dip account for many minor irregularities. (Rec. 428, 429, 534.)

The course of the strike of the mineralized zone is northerly and southerly. The dip is westerly, varying from 15 to 45 degrees. The average dip is approximately thirty-five degrees. (Rec. 420-432, 257-278.) The width or thickness of the mineralized zone, where it could be determined, is at least sixty feet. (Rec. 276, 418, 424.)

This mineralized zone is in place in the solid mass of the mountains. It is between clearly defined walls. The overhanging wall is a cherty siliceous limestone, usually bluish in color. The foot wall is also limestone, but usually less siliceous, color generally grayish. (Rec. 429, 430, 253-4.)

The discoveries for the lode and placer locations were made upon this deposit. (Rec. 479-480.) The lower bed of phosphate is the one now of commercial value. (Rec. 385-6, 482, 735.) The lode locations follow closely the outcrop of the lower phosphate bed. (Rec. 570.)

This phosphate deposit, with its foot and hanging walls, is exposed in many places on the surface; and can be readily traced thereon. (Rec. 529, 805-7.)

Within the walls, bounding this mineral deposit, are found alternating beds of calcium phosphate, shale and limestone. The intervening beds of shale and limestone also contain phosphorus, which is proven by chemical analysis. (Rec. 431, 251-3, 520-1.) The beds of phosphate and alternating beds of shale and limestone are of varying thickness and richness. The individual beds of phosphate vary in thickness from five feet to a few inches. The color of the phosphate is black, the deposit having somewhat the appearance of coal, but not the texture, and a much greater specific gravity. (762-3.) The position of the apex or outcrop of this deposit is visible at many points along the surface, and by which it can be traced throughout the ground

covered by the placer and lode locations. This deposit, in the form stated, is the only mineral deposit known to exist in the ground included within the exterior boundaries of the several placer and lode locations. (Rec. 470-473, 479.)

The characteristics noted are in general similar where this deposit or mineralized zone has been found in other parts of Wyoming, Southeastern Idaho and Northeastern Utah.

## 6. THE LODGE LOCATIONS.

These locations are laid to cover the mineralized zone on its course at its outcrop or apex. The Mt. Pleasant location is made on the outcrop of the vein caused by the erosion which made Montpelier Canyon. From this claim the vein rises and outcrops again on the Arkansas lode claim, making the true apex of the vein or lode in this latter claim. (Rec. 799, 539.)

## 7. EXPLORATION AND MINING DEVELOPMENTS.

Numerous tunnels have been driven in on the deposit as shown on Exhibit 1, also much stripping, to expose the deposit at the surface. All the workings on the claims involved in this cause, shown on Exhibit 1, were made prior to defendant's applica-

tion for patent. The surface and underground workings clearly disclose the form and character of the deposit, its walls, its strike, its dip, its continuity on dip and strike, and its contents to be as heretofore stated.

## 8. MINING, TREATMENT AND USES.

The deposit is mined by blasting and other methods, the same as coal, ore and minerals are generally mined. It is transported to mills for reduction and treatment; and the product is now used chiefly as a fertilizer. Phosphorus is also used in the arts and industries. Phosphor-bronze metal is extensively used for special purposes. In the manufacture of certain kinds of matches, it has a valuable application. Phosphorus compounds are used also in *Materia Medica*. (Rec. 255, 466, 337, 546.)

## SPECIFICATIONS OF ERRORS RELIED UPON.

1. Because the evidence showed that within the exterior boundaries of defendant's alleged placer mining claims, to wit: "Wilmington," "Colcock," "Inman," "Winfield," "Winter," "Wonder," "Winslow," and "Wizard," and each of them respectively, the only valuable mineral deposit therein contained

is a solid body of mineral found in place in the mass of the mountain within clearly defined walls of a characteristic weight, color and texture, and has a definite dip and strike, and therefore the court erred in decreeing the defendant to be the owner and entitled to the possession and occupancy of said alleged placer mining claims and each of them, and in not dismissing the cross-bill of complaint of the defendant and adjudging that said alleged placer mining claims and each of them were and are invalid.

2. Because the evidence showed that neither the defendant nor its predecessor in interest had initiated or maintained its said placer locations, to wit: "Wilmington," "Colcock," "Inman," "Winfield," "Winter," "Wonder," "Winslow," and "Wizard," or either or any of them, in compliance with the laws of the United States or the local regulations of the State of Idaho, in that the evidence showed that the ground covered by defendant's said placer locations and each of them, and the ground included within the complainants' lode locations, to wit: "Obey," "Obed," "Jimtown," "Fentress," "Cumberland," "Overton," "Mt. Pleasant," "Arkansas," "Hickman," "Columbia," and "Wayne," and each of them, including the conflict area between said lode and said placer locations was not subject to location, acquisition and purchase by means of placer locations, but only by lode locations; that the valuable mineral deposit contained within defendant's said alleged placer mining locations and

upon which such locations and each of them are solely based, is the one and only valuable mineral deposit therein contained and is the identical mineral deposit sought to be secured by the complainants by virtue of their said lode locations; that said valuable deposit is a solid body of mineral found in place within the mass of the mountain between clearly defined walls of a characteristic weight, color and texture, with definite dip and strike and continuity on dip and strike, and not otherwise; and, therefore, the court erred in decreeing and holding that the defendant is the owner and entitled to the possession and occupancy of the area described in the decree in conflict between said defendant's placer locations and complainants' said lode locations by virtue of the compliance with the laws of the United States or of the State of Idaho, or otherwise, and in adjudging and decreeing the adverse claim of complainants based upon their said lode locations to the extent of the conflict area between said lode and said placer locations to be invalid or groundless, and in quieting the defendant's alleged title to said conflict area.

3. Because the evidence showed that the complainants had lawfully initiated and maintained their several lode locations, to wit: "Obey," "Obed," "Jimtown," "Fentress," "Cumberland," "Overton," "Mt. Pleasant," "Arkansas," "Hickman," "Columbia," and "Wayne," and each of them respectively, by full compliance with the laws of the United

States and the local regulations of the State of Idaho; that the respective parties to this action are each claiming respectively identically the same mineral deposit, the complainants by virtue of lode locations and the defendants by virtue of placer locations; that in the ground covered by such locations respectively, including the area in conflict, the valuable deposit consists of a solid mass of mineral found in place within clearly defined walls of a characteristic weight, color and texture, in the mass of the mountain with definite dip and strike and continuity on dip and strike, and contains no other valuable mineral deposit; and, therefore, the court erred in not adjudging and decreeing that all of complainants' lode locations and each of them respectively were valid and that complainants were the owners and entitled to the possession of the conflict area with defendant's said placer locations, as prayed for in their amended bill of complaint herein and described therein and in said decree.

### ARGUMENT.

It should be borne in mind that this case does not involve the question of a lode within a valid placer location, for which provision is made by Sec. 2333 Rev. Stat. It is undisputed and conceded that there is but the one individual mineral deposit contained within the exterior boundaries of the



several placer and lode locations. Each party is respectively seeking to acquire the same identical mineral deposit, appellee by means of prior placer locations, appellant by means of subsequent lode locations. This one continuous mineral deposit on its course longitudinally is the sole basis to support the respective discoveries, locations and claims to the exclusive right of possession. If the deposit is a vein or lode coming within the purview of Sec. 2320, Rev. Stat., then in any event the placer locations are void—the judgment in favor of appellee is erroneous; and the lode locations, if peaceably made, are valid and the appellants were and are entitled to be awarded herein the ground in controversy.

That issue, viz.: As to the form in which the mineral appears, whether in placers or in lodes or veins, is directly and clearly tendered by the Bill of Complaint and Answer thereto, also by the Cross-Bill and Answer thereto. See Amended Bill of Complaint, paragraph X (Rec. 18-21), and Answer thereto, paragraph X (Rec. 27-29), also Cross-Bill of Complaint, paragraph IX (Rec. 35), and Answer thereto, paragraph 8 (Rec. 44-45).

The controlling question in this case, the sole ground upon which the validity of the placer locations is challenged, is whether the valuable mineral deposit contained within the ground in controversy is a vein or lode as defined by Sec. 2320, Rev. Stat. If the deposit is such a vein or lode, the remaining question is whether the lode locations were peaceably

initiated within the boundaries of the void placer locations.

Following the line of argument of counsel for defendant (appellee herein) the Judge of the District Court held that the underlying question in issue was one not within the province of the court to pass upon and determine, but one exclusively for the determination of the Land Department. (198 Fed., 942.)

In anticipation of that argument here and in view of that decision, four questions are presented, which, for convenience in presentation and to avoid unnecessary repetition, we arrange in the following order: (1) Whether a lode or vein, particularly a non-metalliferous lode or vein, can be secured by means of a placer location? (2) Is it the duty and within the province and jurisdiction of the court in this action, brought in support of an adverse claim pursuant to the provisions of Sec. 2326, Rev. Stat., to determine whether or not the mineral deposit (the sole basis for discovery and location by the placer and lode claimants respectively), is a vein or lode as contemplated by Sec. 2320, Rev. Stat.? (3) Did the lode claimants (the appellants) lawfully initiate their lode locations thereon within the boundaries of the placer locations of appellee? (4) Is the mineral deposit a lode or vein within the purview of Sec. 2320, Rev. Stat.?

All these four questions have recently been decided by the Circuit Court of Appeals, Eighth Circuit (Nov. 21, 1912) in favor of the subsequent

lode claimant and against the prior placer claimant in an adverse case between the same parties as here and involving the same questions, and similar mineral deposit. The evidence being identical in that and in this case, in reference to the form and character of the mineral deposit.

San Francisco Chem. Co. vs. Morse S. Duffield, et al, —Fed.— (Not as yet reported.)

# I.

A PLACER LOCATION MADE TO SECURE A VEIN OR LODGE IN PLACE CONTAINING A VALUABLE METALLIFEROUS OR NON-METALLIFEROUS MINERAL DEPOSIT, IS WHOLLY NUGATORY AND VOID.

First. **Non-metallic minerals are included within the provisions of Sec. 2320, Rev. Stat.**

That section reads in part:

“Mining claims upon veins or lodes of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits,” etc.

That this ore is non-metalliferous, or should be so classed, there is grave doubt. At the present time it is not popularly regarded as metallic, though

partly composed of a metal (calcium). Phosphorus as metallic is not unknown (see Vol. 17, Enc. Britanica, p. 815, 817).

Independent of that question, however, the proper construction of the words "or other valuable deposits" found in Sec. 2320 in connection with the whole mining act, removes any distinction between metallic or non-metallic deposits in determining the question whether a given deposit is a lode or vein.

Non-metallic minerals are minerals coming within the contemplation of the words "or other valuable deposits," found in Section 2320.

Webb vs. American Asph. Min. Co., 157

Fed., 203; 84 C. C. A., 651;

Pac. Coast Marble Co. vs. Nor. Pac. R. R. Co., 25 L. D., 233;

See also N. P. Ry. Co. vs. Soderberg, 188 U. S., 526, 534-537.

The reasoning of the foregoing cases is so clear and convincing that all room for doubt upon the question is removed.

In 1st Lindley on Mines (2d Ed.) Sec. 323, the learned author treats this question: At page 584 he says:

"The act itself in terms makes no distinction based upon the chemical composition of the deposit. But it groups the classes according to the FORM in which the valuable deposits occur. In our judgment, there is no more

reason for insisting that veins or lodes of mica, graphite, asphaltum, gilsonite, or other non-metallic substance in place should be located as placers than it has to require cinnabar deposits to be located as lodes, independently of the form of their occurrence."

and again in conclusion, page 588:

"it follows, in our judgment, that land containing any substance, metallic or non-metallic, which possesses economic value for use in trade, manufacture, the sciences, or in the mechanical or ornamental arts, if such substance exists therein in veins or lodes OF ROCK IN PLACE in sufficient quantities to render the land more valuable for the purpose of removing and marketing the product than for any other purpose, such land must be appropriated under the laws applicable to lodes.

"This may be contrary to the popular notion. But if there is any logic in the law, it seems to us that there is but one conclusion to be deduced, and that is the one we have adopted."

**Second. The placer locations are void. A vein or lode cannot be secured by means of a placer location.**

Webb vs. American Asphaltum Min. Co.,  
157 Fed., 203; 84 C. C. A., 621;

San Francisco Chem. Co. vs. Duffield, et al,  
 supra (C. C. A., 8th Cir.); —Fed.—;  
 United States vs. Iron Silver Min. Co., 128  
 U. S., 673, 675-6;  
 Bevis vs. Markland, 130 Fed., 226, 227;  
 Buffalo Z. & C. Co. vs. Crump, 69 S. W.,  
 572, 573;  
 Mutchmor vs. McCarty, 149 Cal., 603, 610;  
 Grosfield vs. Nigger Hill C. Min. Co., 14  
 Land Dec., 685;  
 1st Lindley on Mines (2d Ed.), Secs. 419,  
 323, 298;  
 Re E. M. Palmer, 38 Land Dec., 294, 296.

In *United States vs. Iron Silver Min. Co.*, supra, a suit to obtain a cancellation of two patents for alleged placer mining claims claimed to have been obtained by fraudulent representations that the land embraced by them was placer mining ground and contained no veins or lodes, Mr. Justice Field says (p. 675-6):

“It is the policy of the government to favor the development of mines of gold and silver and other metals, and every facility is afforded for that purpose; but it exacts a faithful compliance with the conditions required. There must be a discovery of the mineral, and a sufficient exploration of the ground to show this fact beyond question. The form also in which the mineral appears, whether in placers or in veins, lodes or ledges, must be disclosed

so far as ascertained. Misrepresentation knowingly made as to these matters by the applicant for a patent will afterwards justify the government in proceeding to set it aside."

Again (p. 680):

"What is important here is, that the amount of land which may be taken up as a placer claim and the amount as a lode claim, and the price per acre to be paid to the government in the two cases when patents are obtained, are different. And the rights conferred by the respective patents, and the conditions upon which they are held, are also different. Rev. Stat., Secs. 2320, 2322, 2325, 2333; *Smelting Co. vs. Kemp*, 104 U. S., 636, 651; *Iron Silver Min. Co. vs. Reynolds*, 124 U. S., 374."

In *Webb vs. American Asphaltum Min. Co.*, supra, an adverse suit in which the question presented was (p. 204):

"May the right to the possession and to the title to a vein or lode of asphaltum in rock in place be secured by the location of a placer claim upon the land in which it is found?"

Sanborn, C. J., after reviewing the Congressional Acts, sums up for the court as follows (p. 205-6):

"Thus it clearly appears that the plan of this legislation was to provide two general methods of purchasing mineral deposits from the United States—one by lode mining claims,



where the valuable deposits sought were in lodes or veins in rock in place, and the other by placer mining claims where the deposits were not in veins or lodes in rock in place, but were loose, scattered, or disseminated upon or under the surface of the land. The test which Congress provided by this legislation to be applied to determine how these deposits should be secured was the form and character of the deposits. If they are in veins or lodes in rock in place, they may be located and purchased under this legislation by means of lode mining claims; if they are not in fissures in rock in place but are loose or scattered on or through the land, they may be located and bought by the use of placer mining claims. *Reynolds vs. Iron Silver Mining Co.*, 116 U. S., 687, 695, 6 Sup. Ct. 601, 29 L. Ed. 774; *Clipper Min. Co. vs. Eli Min. & Land Co.*, 194 U. S., 220, 228, 24 Sup. Ct. 632, 48 L. Ed. 944."

In *Mutchmor vs. McCarty*, *supra*, Beatty, C. J., in considering the question, says (p. 610):

"The Revised Statutes of the United States (Sec. 2019, et seq.) provide for the disposition alike of lodes or veins, and of placer deposits. The price of lode claims is five dollars per acre of the surface, while that of placer claims is only two dollars and fifty cents. It is, therefore, a fraud for a person cognizant

of the existence of a vein of apparent value to attempt to acquire the title by means of a placer location and patent."

In re E. M. Palmer, 38 Land Dec., 294, 296, *supra*, it is said (p. 296):

"The question as to the class to which a particular mineral deposit is to be referred is vital, and must be determined when arising in patent proceedings. The courts have had occasion to discuss this matter in numerous cases."

We do not apprehend that it will be seriously claimed that if the mineral deposit is a vein or lode "in place" it can nevertheless lawfully be acquired by means of a placer location. From the opinion of the District Court in this case, contained in the transcript and also published (198 Fed., 942), we assume it will be again claimed here that the court in this action, brought pursuant to Sec. 2326, Rev. Stat., has no jurisdiction to pass upon the question and determine whether or not the mineral deposit is a vein or lode in place. That the court's determination of that question would be abortive, being one, it is therein stated, exclusively confided to the Land Department to determine. With that question thus thrust aside (the other acts of location and of maintaining the same having been conceded), it was decided that the prior placer locations were

valid to the extent the court is authorized to ascertain and determine. Such, in effect, it appears was the opinion of the court below; and, notwithstanding that opinion, instead of dismissing this cause without prejudice, a decree was directed to be entered quieting the title of the defendant and appellee to the conflict area. A singular misunderstanding it would seem of the office and purpose of an adverse claim pursuant to Sec. 2325, Rev. Stat. and the jurisdiction and duties of the court in this action brought pursuant to Sec. 2326, Rev. Stat., in support thereof, and of the Land Department in respect thereto.

## II.

IT IS BEYOND QUESTION WITHIN THE PROVINCE AND JURISDICTION AND THE PLAIN DUTY OF THE COURT IN THIS ACTION, IN SUPPORT OF AN ADVERSE CLAIM, TO PASS UPON AND DETERMINE WHETHER THE MINERAL DEPOSIT IN THE LAND IN CONTROVERSY AND WITHIN THE PLACER LOCATIONS IS A LODGE OR VEIN WITHIN THE PROVISIONS OF SEC. 2320, REV. STAT., FOR THE RIGHT OF POSSESSION AND PREFERENCE RIGHT TO A PATENT IS CLEARLY DEPENDENT THEREON; AND THE COURT'S DETERMINATION OF THAT QUESTION IS BY THE ACT OF CONGRESS MADE BINDING ON THE LAND DE-

PARTMENT IN FUTURE PROCEEDINGS  
UPON THE PENDING APPLICATION FOR  
PATENT.

The question of the purpose, scope and controlling effect of a suit under Sec. 2326, Rev. Stat., in support of an adverse claim, is well understood by this court. Yet, owing to the opinion and decision of the court below, we feel compelled to present this familiar phase of the case.

The method prescribed by Congress for obtaining a patent to mining claims is different from any other class of public lands, in that all adverse claims between mineral claimants are relegated to the local courts in the exercise of their general jurisdiction to deal with possessory rights. A statutory exception to the exclusive jurisdiction of the Land Department is created.

This is obvious by consideration of the scheme presented by the Acts of Congress and by the repeated, uniform decisions of the Supreme Court of the United States and also by the Land Department. As said by the court in *Blackburn vs. Portland Gold Min. Co.*, 175 U. S., 571, 586-7:

"It should not be overlooked that Sections 2325 and 2326 form a part of a general scheme in reference to the mineral lands of the United States. That scheme is contained in Chapter 6 of the Revised Statutes of the United States, and includes Sections from 2318 to 2352."

Section 2326 provides:

“Where an adverse claim is filed \* \* \* all proceedings except the publication of the notice and filing of the affidavit thereof, shall be stayed until the controversy shall have been settled or decided by a court of competent jurisdiction, or the adverse claim waived. It shall be the duty of the adverse claimant, \* \* \* to commence proceedings in a court of competent jurisdiction, to determine the question of the right of possession, \* \* \* After such judgment shall have been rendered, the party entitled to the possession of the claim, or any portion thereof, may, without giving further notice, file a certified copy of the judgment-roll, etc., \* \* and a patent shall issue thereon for the claim, or such portion thereof as the applicant shall appear, from the decision of the court, to rightly possess.”

The question submitted to the court for determination is “to determine the question of the right of possession.” This section was amended (Act of March 3, 1881, Ch. 140, 21, Stat. L., 505) by further providing if title to the ground in controversy shall not be established by either party, to find and enter judgment accordingly.

The scheme which the statute presents and the scope and purpose of Secs. 2325 and 2326 and the controlling effect of the judgment on the Land De-

partment have been repeatedly considered, construed and applied.

Richmond Min. Co. vs. Rose, 114 U. S.,  
576, 585;

Iron Silver Min. Co. vs. Campbell, 135 U. S.,  
286, 299;

Shoshone Min. Co. vs. Rutter, 177 U. S.,  
505, 577;

Min. Co. vs. Tunnel Co., 196 U. S., 337,  
357.

The suit "is but a continuation of those proceedings prescribed by the laws of the United States" to have a determination of the question as to which of the contending parties is entitled to a patent.

Wolverton vs. Nichols, 119 U. S., 485, 489;  
Bennett vs. Harkrader, 158 U. S., 441, 447.

As said by the court in Richmond Min. Co. vs. Rose, 114 U. S., 576, 585, and approved in Last Chance Min. Co. vs. Tyler Min. Co., 157 U. S., 683, 693, referring to the action of the officers of the Land Department "after the decision they are governed by it. Before the decision, once the proceeding is initiated, their function is suspended."

The judgment is binding as to every fact necessarily determined by it.

Last Chance Min. Co. vs. Tyler Min. Co.,  
supra, page 695.

Each party is practically plaintiff and to succeed must prove all the acts required to make a valid location, not only as against the adverse claimant, but also as against the government.

Brown vs. Gurney, 201 U. S., 184, 190-1.

In Gwillim vs. Donnellan, et al, 115 U S., 45, 50, the requirements applicable to each of the contending parties is stated as follows:

“To entitle the plaintiff to recover in this suit, therefore, it was incumbent on him to show that he was the owner of a valid and subsisting location of the lands in dispute, superior in right to that of the defendants. His location must be one which entitles him to possession against the United States, as well as against another claimant. If it is not valid as against the one, it is not as against the other. The location is the plaintiff's title. If good, he can recover; if bad, he must be defeated.”

As accurately and tersely said by this court:

“The exclusive right of possession is by Section 2322 of the Revised Statutes conferred only on one who has made a valid location.”

Hanson vs. Craig, 170 Fed., 62, 64; 95 C. C. A. 338.



A party cannot go on the public domain and secure possession by merely the performance of acts prescribed for location.

*Hammer vs. Sawyer, 170 Fed. 31, 1909 C.C.A. 2, 11*

Crede vs. Uinta, 196 U. S., 337, 353;

Hall vs. McKinnon (C. C. A. 9th Cir.),  
193 Fed., 572, 576;

Cook vs. Klonos, 164 Fed., 529, 536; 90  
C. C. A. 403.

With the object and purposes of an adverse suit in mind, it is difficult to comprehend why every fact bearing upon the validity or invalidity of the respective locations is not germane, the province and within the jurisdiction of the court to consider when the issue is properly presented.

The case of Waskey vs. Hammer, decided by this court, 170 Fed., 31, affirmed by the Supreme Court, 223 U. S., 85, furnishes a striking illustration. In that case the location, otherwise a valid prior location, was held void because made by a person disqualified to make a valid location by reason of his having become a United States deputy mineral surveyor.

Doubtless it is unusual for a person to seek to acquire a vein or lode by means of a placer location, because to do so not only renders the location invalid, but is perpetrating a fraud upon the government. Yet when done, it is none the less within the proper scope of inquiry by a court of competent jurisdiction in an adverse case, because the right

of possession of the contending parties necessarily turns upon the placer or lode character of the ground in controversy.

That it is not, as said by the court below (198 Fed., 942, 946), "an idle act, a work of mere superogation" for the court to assume a determination of the pivotal question at issue and involved here, is clear from the construction given by the Supreme Court. Yet the court should not concern itself in respect to the binding effect of its decision upon the Land Department. When that Department in future proceedings upon appellee's pending application for patent ignores the decision and not until then, can that question arise.

To say, in the absence of express statutory exclusion that the court can ascertain some but not all of the essential facts and elements necessary and required to make a location valid and carry with it the exclusive right of possession and preference right to patent, is contradictory. No discrimination is made in the statute. No question either of law or fact necessary to ascertain whether or not all the requirements of law have or have not been complied with, and the location is therefore valid or invalid, is withdrawn or taken from the court; but on the contrary, in cases where adverse claim is permitted, jurisdiction to determine the question is exclusively vested in the court and withdrawn from the Land Department.

In this case, if a non-metalliferous lode or vein is included in the provisions of Sec. 2320, Rev. Stat.,

the inquiry is necessarily limited and confined to the form of the admitted one and only mineral deposit within the boundaries of the placer locations. The material facts in respect thereto are substantially without conflict. It is obvious that the exclusive right of possession and preference right to a patent for the ground in controversy depends wholly upon the court ascertaining and determining the form in which the deposit is found, whether or not the deposit is a lode or vein. That question, in this case, goes to the roots of a valid or invalid location. If the mineral deposit is a vein or lode, the foundation of appellee's placer locations falls. If it is **not** a "placer" the placer locations must also fail.

The discoveries made as required by law (Sec. 2320, Rev. Stat.), by the respective placer and lode claimants are and can be **appropriate** and sufficient only as to one of such claimants, depending upon the class to which the mineral deposit belongs. To be **appropriate** and effective for lode locations, that the deposit is a vein or lode in place; for placer locations, that **it is not** a vein or lode, but ground valuable for placer mining.

Steele vs. Tanana M. R. Co., 148 Fed., 678;

78 C. C. A. 412;

Chrisman vs. Miller U. S., 313, 323;

Garibaldi vs. Grillo (Cal.), 120 Pac., 425,  
426.

The case last mentioned emphasizes the importance and necessity for proof regarding form and character. The parties had stipulated that the land in controversy was placer land. It is there said:

“The parties were competent to stipulate as to their contending and conflicting rights, but they could not by stipulation relieve themselves from proving at the trial that they had made a discovery of gold, either in placers, or in veins, or lodes, in the land, as contemplated by the laws of the United States.”

The lode claimants having properly filed an adverse claim against the application for placer patent, then every fact necessary to the determination of the right of possession and priority of right to a patent, is taken away from the Land Department by the Acts of Congress and transferred to a court of competent jurisdiction for adjudication, when suit is timely brought in support of the adverse claim.

Under the facts presented in this case, an adverse claim is not only proper but indispensable.

San Francisco Chem. Co. vs. Duffield, et al,  
— Fed., —;

Dahl vs. Raunheim, 132 U. S., 260, 261;

Butte & B. Min. Co. vs. Sloan, 16 Mont.,  
97; 40 Pac. 217.

In Dahl vs. Raunheim, 132 U. S., 260, 261, some of the consequences of a lode claimant failing

to adverse the application of a placer claimant's application for patent are pointedly stated by Mr. Justice Field as follows:

“To this application no adverse claim to any portion of the ground was filed by the defendant or any other person, and the statute provides that in such case it shall be assumed that the applicant is entitled to a patent upon certain prescribed payments, and that no adverse claim exists. The statute also declares that thereafter no objection of third parties to the issue of a patent shall be heard, except it be shown that the applicant has failed to comply with the requirements of the law. No such failure was shown by the defendant. **He is, therefore, precluded from calling in question the location of the claim, or its character as placer ground.**”

The fallacy of the reasoning of the learned Judge of the District Court in his opinion, and the erroneous basis adopted for the decision, to the effect that the court is without jurisdiction to determine in this case whether the mineral deposit is in the form of a lode or of a placer deposit, is not difficult to discover.

The proceedings under Secs. 2325 and 2326, Rev. Stat., are limited to controversies between adverse mineral claimants only. To controversies where the mineral character of the land is mutually asserted and assumed by the court.

“Adverse proceedings are called for only when one mineral claimant contests the right of another mineral claimant.”

Min. Co. vs. Tunnel Co., 196 U. S., 337;  
 Helena, etc. Co. vs. Dailey, 36 Land Dec.,  
 144;  
 Iron Silver Min. Co. vs. Campbell, 135 U.  
 S., 286, 299.

It is not provided or contemplated by the Congressional Acts, that the court in an adverse suit shall have jurisdiction to pass upon and determine the character of the land in controversies between mineral and non-mineral claimants. That question in the first instance is one exclusively for the Land Department. Consequently, notwithstanding the judgment in the adverse suit, the Land Department, previous to patent, at the instance of a protestant or on its own motion may direct a hearing to ascertain the character of the land. That class of hearings are governed by Sec. 2335, Rev. Stat., and L. O. Reg. par. 109-119.

This is far from excluding from the determination of the court in an adverse suit the question of the placer or the lode character of the mineral ground in controversy, when the answer to that question determines the validity of the location and the right of possession.

The discovery of mineral in such quantities as to justify the expenditure of money in search thereof

that will support the requirements of a discovery under Sec. 2320, Rev. Stat., either lode or placer, does not settle or determine the further question whether the land is more valuable for mineral (lode or placer) than for agricultural or other non-mineral purposes.

Taking up the cases cited and quoted from in support of the opinion of the Judge of the District Court herein, not one of them will be found to support the principle advanced by the court below.

In **Wolverton vs. Nichols**, 119 U. S., 485, we fail to discover any bearing upon the questions here. That case involved an adverse claim between placer claimants. The court below granted a non-suit, the Supreme Court reversed the judgment and held that the defendant had "a right to have the verdict of the jury on the question at issue so as to settle the question which the Act of Congress required settled."

In **Steel vs. St. Louis Smelting & R. Co.**, 106 U. S., 447, the Smelting Company brought an action to recover possession of certain real property in Leadville. The defendant answered claiming ownership "by superiority of possessory title and priority of actual possession" of the premises as part of a townsite on the public domain; that the title of the plaintiff was derived from one Starr, to whom a mineral patent was issued embracing the premises in controversy; and the special defenses set up were that the mineral patent was void, that fraud, bribery, etc., were used to obtain it.



In the course of the opinion, and as the basis for the paragraph quoted in the opinion by the District Judge in the case at bar wherein, referring to the Land Department, the object of its creation, and the powers it possesses, the court expressed "an unpleasant surprise to find that counsel, in discussing the effect to be given to the action of that department, overlooked our decisions on the subject," etc., etc., is reflected and made perfectly plain and consistent with the position we maintain, by the preceding paragraph wherein Mr. Justice Field makes the following clear and explicit enunciation:

"Whenever, therefore, mines are found in lands belonging to the United States, whether within or without townsites, they may be claimed and worked, provided existing rights of others, from prior occupation, are not interfered with. Whether there are rights thus interfered with which should preclude the location of the miner and the issue of a patent to him or his successor in interest, is, when not subjected under the law of Congress to the local tribunals, a matter properly cognizable by the Land Department, when application is made to it for a patent; and the inquiry thus presented must necessarily involve a consideration of the character of the land to which title is sought, whether it be mineral, for which a patent may issue, or agricultural, for which a

patent should be withheld, and also as to the citizenship of the applicant."

**Clipper Min. Co. vs. Eli Min. & Land Co.,** 194 U. S., 220, and 33 Land Dec. 660, remain to be noticed.

The litigation involved in those decisions has extended over a quarter of a century and up to the present time will be found reported in 7 Copp's Land Owner, 36, re Searle Placer; 11 Land Dec., 441; re Clipper Min. Co., 22 Land Dec., 527; Clipper Min. Co. vs. Eli Min. Co., 29 Colo., 377; 68 Pac., 286; Clipper Min. Co. vs. Searl, et al, 29 Land Dec., 137; Clipper Min. Co. vs. Eli Min. Co., 194 U. S., 220; Clipper Min. Co. vs. Eli Min. Co., 33 Land Dec., 660; Clipper Min. Co. vs. Eli Min. Co., 34 Land Dec., 401.

Briefly, the Searle placer was located in 1877, thereupon the county judge applied to enter the same land as a townsite for the benefit of the inhabitants of North Leadville. A hearing was ordered by the Land Department, resulting in the finding that the surveyor general's return that the land was mineral in character was not overcome and the townsite application was dismissed. (7 C. L. O., 36, supra.) Subsequently the owner of the Searle placer made application for patent including an area of about 150 acres. His application was met by adverse claims, some were settled and others eliminated by an amended survey and application including about 100 acres. Thereupon, upon the

the report of a special agent of the department and representations of residents of Leadville alleging that the ground was not placer, the Department "finding great doubt whether the ground was more valuable for placer mining than for other purposes" ordered a hearing to ascertain the character of the land, etc. Upon the hearing the land officers found "that the land was not distinctively valuable for placer mining, \* \* \* and recommended the rejection of the pending application." This ruling was approved by the Commissioner, and on appeal affirmed by the Secretary. (11 L. D., 441, *supra*.) A few days thereafter four lode mining claims, comprising about 35 acres were located within the Searle placer boundaries. The lode claimants thereupon applied for patent. The Searle placer claimant adverse and brought suit in support thereof. The issues presented and tried, were: (1) Whether the plaintiff (Searle placer claimant) was entitled to recover because of the decision of the Land Department upon the application for patent by the owner of the Searle placer that the ground included within its boundaries was not placer ground and the attempted location was for that reason void and that such decision was *res judicata* of the present controversy. (2) Assuming the existence of the valid prior Searle placer, nevertheless defendant (lode claimants) went upon the placer surface area and made locations of lode claims which were known to exist and therefore in law the same were part of the public domain. The trial court found, among other

things, that the Searle placer was duly located as required by law in 1877 and subsequently amended. On appeal the Supreme Court of Colorado was bound by that finding and consequently accepted it. (29 Colo., 377; 68 Pac., 286, *supra*).

The case was taken to the Supreme Court of the United States (194 U. S., 220, *supra*.) That court also was bound by the finding, viz., that the placer location was valid, it therefore accepted that the Searle Placer was duly located and was a subsisting valid placer location.

Mr. Justice Brewer, speaking for the court, says (p. 222):

“The defendant, on the other hand, contends that the original location of the placer claim was wrongful, for the reason that the ground included within it was not placer mining ground; that the intent of the locators was not placer mining but the acquisition of title to a large tract of ground contiguous to the new mining camp of Leadville, and likely to become a part of the townsite. In fact, it was thereafter included within the limits of the town, and on it streets and alleys have been laid out and many houses built and occupied by individuals claiming adversely to the placer location.”

The court held that it had no jurisdiction to review the decision upon a question of fact, that—

“It must therefore be accepted that the

Searle placer was duly located \* \* \* that there was a subsisting valid placer location."

The court then clearly points out that notwithstanding the judgment in the adverse suit in favor of the placer claimant their rights to a patent are not settled beyond the right of inquiry by the government, or that the judgment necessarily gives to them the lands in controversy, that it remains for the Land Department to ascertain the character of the land; summing up thus (p. 234):

"The land office may yet decide against the validity of the lode locations and deny all claims of the locators thereto. So also it may decide against the placer location and set it aside, and in that event all rights resting upon such location will fall with it."

After this decision, the successful placer claimant in the adverse suit sought to enter the alleged lodes under the judgment roll. The Commissioner directed a hearing touching the character of the land embraced within the placer location "whether patentable placer or not at the date of the application for lode patent." (33 L. D., 660, 671, *supra*.) The Secretary affirmed that order. (34 L. D., 401, *supra*.) In the course of an exhaustive discussion of the subject the secretary says (page 403):

“The Department recognizes and reaffirms to its fullest extent the general principle, so often declared by the courts and the Department, that ‘the question of the right of possession’ as between contending mineral claimants is exclusively of judicial cognizance, and that the award of that right by a court of competent jurisdiction is binding upon the parties and the land department. In the final analysis, however, this principle has always in view the ‘right of possession,’ which is the essential basis of the legal title obtainable under the mining laws, as counsel for respondents affirm it to be. That the principle contemplates, as the subject of judicial disposition, a right of possession which shall thereafter be found by the land department in the exercise of its jurisdiction, to be effective for patent purposes is manifest from the provisions of section 2326 whereunder the adjudged right may, upon submission of the judgment roll and ‘without giving further notice,’ be made the basis of the paramount title. See in this connection, *Gwillim vs. Donnellan*, 115 U. S., 45, 50-1.” And again (p. 408), “A location which the courts will recognize as valid may be predicated upon a discovery of mineral which would fall short of establishing the mineral character of the land under the settled and approved rule of determination; but to prevail eventually the location must be shown to embrace mineral land of corresponding char-

acter, lode or placer, which may become the subject of mineral patent.”

### III.

## THE LODGE LOCATIONS OF APPELLANTS WERE LAWFULLY INITIATED.

The prior placer locations of appellees being fatally defective, invalid and void, the ground embraced therein was open to peaceable adverse entry for discovery and location by appellants under the Acts of Congress, although they knew of the attempted prior placer locations upon it.

This court has settled that proposition.

*Home & S. Co. vs. Snyder*, 187 Fed., 385, 389; 109 C. C. A., 217.

Hanson vs. Craig, 170 Fed., 62; 95 C. C. A., 338.

Cook vs. Klonos, 164 Fed., 529, 535-6, 90 C. C. A. 403;

Johanson vs. White, 160 Fed., 901, 88; C. C. A. 83.

The rule is well established:

Olive L. & D. Co. vs. Olmstead, 103 Fed., 568, 573.

Brown vs. Oregon King Min. Co., 110 Fed., 728.



San Francisco Chem. Co. vs. Duffield,  
 (C. C. A. 8th Cir.), ——Fed.——;  
 Belk vs. Meagher, 104 U. S., 279.  
 Lockhart vs. Johnson, 181 U. S., 516, 527.  
 Walsh vs. Henry (Colo.) 88 Pac., 449.

In Thallmann vs. Thomas, 111 Fed., 277, 278-9;  
 49 C. C. A. 317, approved in San Francisco Chem.  
 Co. vs. Duffield, *supra.*, ——Fed.——, the rule is  
 clearly enunciated, where it is said:

“A valid claim to unappropriated public  
 land cannot be instituted while it is in posses-  
 sion of another who has the right to its posses-  
 sion under an earlier lawful location. Risch vs.  
 Wiseman (Or.) 59 Pac. 1111; Seymour vs.  
 Fisher, 16 Colo. 188, 27 Pac. 240. Nor can such  
 a claim be initiated by forcible or fraudulent  
 entry upon land in possession of one who has  
 no right either to the possession or to the title.  
 Atherton vs. Fowler, 96 U. S. 513, 516, 24 L.  
 Ed. 732; Trenouth vs. San Francisco, 100 U. S.  
 251, 256, 25 L. Ed. 626. But every competent  
 locator has the right to initiate a lawful claim  
 to unappropriated public land by a peaceable  
 adverse entry upon it while it is in the posses-  
 sion of those who have no superior right to  
 acquire the title or to hold the possession. Belk  
 vs. Meagher, 104 U. S., 279, 287, 26 L. Ed., 735;  
 Johnson vs. Towsley, 13 Wall, 72, 20 L. Ed.,  
 485; Nevada Sierra Oil Co. vs. Home Oil Co.

(C. C. 98 Fed., 673, 680.) Any other rule would make the wrongful occupation of public land by a trespasser superior in right to a lawful entry of it under the acts of congress by a competent locator. There was nothing in the possession of the lode in this land by the complainants many feet below its surface, and their wrongful removal of ore from it, nor in the defendant's suspicion or knowledge of this trespass, nor in the fact, if it be a fact, that he learned of the trespass through his employment as a miner and shift boss of the complainants, to prevent him from making an honest and valid location of a mining claim upon this unappropriated portion of the public domain in accordance with the provisions of the acts of congress which offered him this privilege."

The appellants did not violate or transgress in any manner the established rules in making and maintaining their lode locations.

The facts are as follows: On the 15th and 16th days of November, 1907, the appellants peaceably entered upon the ground then vacant and unoccupied (Rec. 119, 152-3), put up notices at discovery points for the several lode claims and partly marked the boundaries of the claims. On the 20th day of November, 1907, they returned and completed making the survey and marking of boundaries by November 25th, 1907. (Rec. 110, 111.) On November 26th, 1907, they returned and remained until

December 9th, 1907, (Rec. 122), and performed the discovery work for each of the lode claims as required by the laws of Idaho. On December 6th, 1907, after the discovery work had been performed on all of the lode claims, except only the Mt. Pleasant, and while engaged in completing such work on the Overton (Rec. 144) Mr. Sullivan and Mr. Taylor, representing the San Francisco Chemical Company, went upon the ground and found Mr. Colbath and Mr. Sampson digging a pit, who stated they were working for Mr. Duffield and Mr. Jeffs. They were informed that the ground had been located and belonged to the San Francisco Chemical Company. The men left work (Rec. 489-492). The next day the work was peaceably resumed and continued until completed. (Rec. 194.)

On December 6, 1907, there was also a conversation between Mr. Duffield and Mr. Sullivan, et al., at Montpelier. (Rec. 145-150; 492-3.)

When the annual work for 1908, 1909 and 1910 was being done by appellants, objections were made by appellee. The bearing or importance of that fact is not perceptible, but if it be important, we hereby refer to the record: For the year 1908 (Rec. 169-175, 189, 490). For the year 1909 (Rec. 175). For the year 1910 (Rec. 168, 230, 231, 485, 486, 838-840). In fact it has been stipulated that appellants performed the requisite discovery work, duly marked the boundaries of their lode claims and each of them, and posted the location notices and per-

formed the requisite work of \$100.00 for each claim and in each calendar year. (Rec. 453-4.)

The rule would be the same if the placer locations were **valid** by reason of proof that they contained extrinsic of the mineral deposit in controversy ground valuable for placer mining purposes (which is not the fact and so conceded.) The "known" lode or vein in place would be subject to location openly and peaceably by the first to appropriate it by a valid lode location, whether it be the placer claimant or others.

1. Lindley on Mines. (2nd Ed.) Sec. 413.

The subject will be found exhaustively treated in Mt. Rosa Min., Mill & L. Co. vs. Palmer, 56 Pac. 176; 26 Colo. 56. The syllabus, sub-div. 2 and 3, is as follows:

"2. A placer location confers neither title to nor possession of, nor withdraws from subsequent location by others, known lodes or veins of mineral in place within its limits, under Rev. St. U. S. Sec. 2333, providing that a placer patent which fails to include an application for a vein or lode claim known to exist within its limits shall be deemed a conclusive declaration that the placer claimant has no right thereto.

"3. Since a placer patent confers no possession to known lodes or veins within its limits, a subsequent locator of a vein or lode within

the limits of a placer claim is not a trespasser, as against the placer claimant, within the rule that a trespasser on a lawful possession can acquire no rights."

That this lode or vein, within the limits of the placer locations was "known" to exist by the appellee and its predecessors in interest is undoubted. The old (Jones) lode locations had been forfeited and abandoned, thereby leaving the lodes subject to appropriation by peaceable entry and compliance with the requirements for locating veins and lodes. This appellants did.

A different rule prevails where a person goes upon a prior **valid** placer location and makes a location to prospect for **unknown** lodes. That is not permitted without the acquiescence of the placer claimant, express or implied.

Clipper Min. Co. vs. Eli Min. & L. Co.,  
194 U. S., 220, 230.

We have no such case presented here. The lodes were known and located and explored first in 1904. Then abandoned. The appellants in making the lode locations in 1907 had the lawful right to appropriate the former discoveries of the lode.

Hayes vs. Lavagnino, 17 Utah, 185; 53  
Pac., 1029.

## IV.

THE MINERAL DEPOSIT IN QUESTION IS  
A VEIN OR LODGE WITHIN THE PURVIEW  
OF SECTION 2320, REVISED STATUTES  
OF THE UNITED STATES.

Within the ground extending throughout the length of the lode and placer claims from north to south there exists but the one valuable mineral deposit. Each party is seeking to secure the same identical mineral deposit, the complainants by lode and the defendant by placer locations.

The paramount question in this case is reduced to a determination as to which of the two classes of deposits under the mining laws this valuable mineral deposit belongs. That, we believe, is the sole question involved.

The provisions of the Act of Congress bearing upon the question are contained in Sections 2318, 2319, 2320, 2322, 2329 and 2333, Revised Statutes of the United States.

The legislation clearly separates and divides into two **distinct** classes the mineral lands of the United States, to-wit:

(a) Those containing veins or lodes of quartz or other rock in place bearing mineral of value of any kind or character that may be found therein. (Sec. 2320.)

(b) Those "usually called 'placers,' including all forms of deposits, excepting veins of quartz or other rock in place." (Sec. 2329.)

It further clearly appears from the Act that these two classes of deposits are completely distinct and separate from each other, and when found to exist in the same superficial area they may be located by different persons and separately patented. (Sec. 2333.)

If the deposit is a vein or lode within the contemplation of the Acts of Congress, then the placer locations are nullities. The ground included is non-placer ground. The deposit can be legally acquired only by lode locations. The inquiry then is solved by determining whether or not the mineral deposit in question belongs to the class known as "veins or lodes."

With singular certainty, the evidence presented shows that the only known mineral deposit contained within the survey limits of the several placer claims, is a mineralized zone and deposit of rock in place in the mass of the mountains extending throughout its entire length between well defined walls of neighboring rock. That it has a definite dip and strike and that it is of commercial and economic value.

With these controlling characteristics, this deposit is unquestionably a vein or lode within the purview of the mineral laws of the United States.



- Iron-Silver Min. Co. vs. Cheesman, 116  
U. S., 529-534-536;  
Reynolds vs. Iron Silver Min. Co., 116  
U. S., 687-695;  
United States vs. Iron Silver Min. Co., 128  
U. S., 673-680;  
Iron Silver Min. Co. vs. Mike and Starr  
G. & S. Min. Co., 143 U. S., 394-404-  
420-1;  
1st Lindley on Mines, (2d Ed.) Sec.  
292-294.  
Noyes vs. Clifford, (Mont.), 94 Pac. 842-  
847.

In the foregoing authorities is found the general legal definition of a "vein" or "lode" under the Act of Congress, mostly involving the question whether the question whether the deposit is to be classed under said Act as a lode or vein or as a placer.

The one there quoted, applied and approved and held sufficient for all practical purposes for determining the existence of a vein or lode under the Act as distinguished from a "placer," is the familiar definition by which Judge Hallett defined those terms, as follows:

"To determine whether a lode or vein exists, it is necessary to define those terms: and, as to that, it is enough to say that—

“A ‘vein’ or ‘lode’ is a body of mineral, or mineral-bearing rock, within defined boundaries in the general mass of the mountain.”

He then proceeded to say:

“In this definition the elements are the body of mineral or mineral-bearing rock and the boundaries; with either of these things well established, very slight evidence may be accepted as to the existence of the other,  
\* \* \* In the existence of such a body, and to the extent of it, boundaries are implied. On the other hand, with well defined boundaries, very slight evidence of ore within such boundaries will prove the existence of a lode.

“Such boundaries constitute a fissure; and, if in such fissure ore is found, although at considerable intervals and in small quantities, it is called a lode or vein.”

Judge Miller, in (Stevens vs. Williams, 1 McCrary, 480-488) referring to that definition of Judge Hallett, said:

“I do not know a better or more comprehensive definition than that.”

In *Iron Silver Min. Co. vs. Mike and Starr G. and S. Min. Co.*, supra, this definition was held

applicable to a mineral deposit described by the Court as follows: (p. 399-400.)

“The fact is, there was an earnest inquiry as to whether the Court had not erred in its prior and repeated ruling, that a known lode, as named in Section 2333 of the Revised Statutes, is something other than a located lode; and, also, whether, in view of the disclosures made in this, as in prior cases, of the existence of a body of mineral underlying a large area of country in the Leadville mining district, whose general horizontal direction, together with the sedimentary character of the superior rock, indicated something more of the nature of a deposit like a coal bed than of the vertical and descending fissure vein, in which silver and gold are ordinarily found, it did not become necessary to hold that the only provisions of the statute under which title to any portion of this body of mineral, or the ground in which it is situated, can be acquired, are those with respect to placer claims.”

The decision in that case, which was twice argued, the second time upon six specific questions, among them: (P. 395.) “First. What constitutes a ‘lode’ or ‘vein’ within the meaning of Sections 2320 and 2333 of the Revised Statutes? Second. What constitutes a ‘known lode or vein’ within the meaning of Section 2333?” Stands without qualification or exception and plainly would seem to con-

clude any possible doubt upon the question and definitely places this deposit in the category of veins or lodes under the Act of Congress, as distinguished from "placer claims."

The description of a lode as given by Mr. Justice Field in the celebrated case of *Eureka Cons. Co. vs. The Richmond Co.*, 4 Saw., 302, 312, viz.:

"We are of the opinion, therefore, that the term (lode) as used in the Acts of Congress is applicable to any zone or belt of mineralized rock, lying within boundaries clearly separating it from the neighboring rocks."

clearly includes all bedded deposits. It applies to this case.

*San Francisco Chem. Co. vs. Duffield*,  
supra., —Fed.,—

*Meydenbauer vs. Stevens*, 78 Fed., 787.

A lode may and often does contain more than one vein.

*United States vs. Iron Silver Min. Co.*, 128  
U. S. 673, 680.

In *U. S. Min. Co. vs. Lawson* (C. C. A. 8th Cir.) 134 Fed., 769, 772-3, (affirmed by the Supreme Court, 207 U. S., 1)—opinion by Van Devanter, C. J.—a belt of limestone from 100 to 200 feet in

width, confined between well defined walls, was held to constitute a single broad vein or lode of mineral-bearing rock.

That this deposit does not come within the class of deposits subject to location and acquisition as placer claims under the Act of Congress is apparent from the legal construction given to the act defining placer claims.

Reynolds vs. Iron Silver Min. Co., 116  
U. S., 687, 695;

Clipper Min. Co. vs. Eli Min. & Land Co.,  
194 U. S., 220, 228;

Webb vs. American Asph. Min. Co., 157  
Fed., 203, 204; 84 C. C. A., 651;

United States vs. Iron Silver Min. Co., 128  
U. S., 673, 679.

As said in Reynolds vs. Iron Silver Min. Co. supra, in distinguishing the two classes of deposits: (Pg. 695.)

“Placer mines, though said by the statute to include all other deposits of mineral matter, are those in which this mineral is generally found in the softer material which covers the earth’s surface, and not among the rocks beneath.”

Mr. Justice Field, in United States vs. Iron Silver Min. Co., supra, defined placer as distin-

guished from a vein or lode under the Act of Congress, as follows:

“By the term ‘placer claim’ as here used, is meant ground within defined boundaries which contains mineral in its earth, sand or gravel; ground that includes valuable deposits not in place, that is, not fixed in rock, but which are in a loose state, and may in most cases be collected by washing or amalgamation without milling.”

In *Clipper Min. Co. vs. Eli Min. Co.*, *supra*, it is said:

“A placer location is not a location of lodes or veins underneath the surface, but is simply a claim of a tract or parcel of ground for the sake of loose deposits of mineral upon or near the surface.”

That this mineralized zone and deposit is “in rock in place” is too clear to permit of any discussion.

1st Lindley on Mines (2d Ed.) Sec. 298,  
et seq.

The witnesses all admitted that fact. One of them (Mr. Weeks) particularly emphasized the fact by the assertion in substance that it was in rock in place as much as any deposit within sedimentary

rocks could be in place. That the deposit is in the mass of the mountains with continuity, definite dip and strike, is admitted. Also that the mineralized zone and deposit lies between walls prominently and clearly marking and defining its boundaries, is established without contradiction and conceded, provided, however, instead of walls, we say roof and floor, or overhanging and underlying rock, or use some descriptive term other than "walls."

That the deposit is a valuable mineral deposit is also admitted; naturally so, as each party is seeking to secure it for its commercial value only.

The decisions of the Land Department in reference to issuing patents for Western phosphate deposits, while not controlling upon the court, are undoubtedly entitled to proper consideration.

In the absence of any contest, by protest or otherwise, the Department has issued one placer patent in the case of the "Waterloo," and in three instances Final Entry was allowed by the local land office as placers. (See Rec. Defts. Ex. 6, 7, 8 and 9, (8 and 9 being duplicates), p. 843-848.)

This question, however, had never reached or been passed upon by the Secretary of the Interior until recently, (Dec. 7th, 1912), in re Harry Lode Mining Claim. In that case the Secretary's instructions issued to pass the claim to patent as a lode. After reviewing many authorities, the Secretary concludes by saying:



“From the foregoing, it is clear to the Department that a deposit of phosphate rock, such as that hereinabove described, confined, as it is shown to be, between well defined boundaries, constitutes a lode or vein of mineral-bearing rock in place within the general mass of the mountains, and hence is subject to disposition only under the provisions of the lode mining law.”

As sufficient time has not elapsed for publication of that decision in the regular volumes of reports, we print it in full in the appendix hereto.

Since that decision, the Secretary has already ordered cancelled, two of said Final Entries (Ex. 6 and 7), with leave to change from placer to lode locations, providing Executive order of withdrawal of phosphate lands can be so modified.

The first contest was made by the San Francisco Chemical Co., (the same company appellee here), by protesting March 23, A. D. 1908, against the issuance of a patent to Bradley Bros., for the “Lorine” and other lodes under the laws relating to lode claims. The Commissioner decided in favor of the lodes.

Because the decision referred to is not published in readily accessible legal publications, in the appendix hereto we have caused to be printed in full the memorandum decision on the Lorine lode, which we take from the public document entitled:

"PHOSPHATE LANDS  
HEARINGS  
HELD BEFORE THE COMMITTEE ON THE  
PUBLIC LANDS OF THE HOUSE OF  
REPRESENTATIVES  
on  
December 17, 1908,  
January 13, 15, 16, and February 2, 1909  
on  
H. R. 21873  
TO DEFINE THE MANNER IN WHICH PUB-  
LIC LANDS CONTAINING VALUABLE  
DEPOSITS OF PHOSPHATE AND  
PHOSPHATE ROCK MAY  
ACQUIRED."

This decision, it there appears, had the approval of the Assistant Secretary of the Interior.

The second and only other contest was the one in re Harry lode, *supra*. That contest was decided by the Commissioner in favor of the lode claimant September 24th, 1910. On motion for review, the Commissioner, January 10th, 1911, directed a further hearing. We feel safe in saying that in every contested case involving similar Western phosphate deposits, the Department has decided in favor of the validity of the lode locations, and against the validity of the placer locations. We find no case to the contrary, or any contested case where placer patent has been allowed.

## WATERLOO PLACER.

This claim includes a portion of the same mineral deposit. It is situated adjacent to the ground in controversy. In the memorandum decision by the Commission in re Lorine Lode before referred to and found in the Appendix hereto, the circumstances under which a placer patent was issued for the Waterloo are explained. In its protest against the issuance of a lode patent to the Lorine lode, the San Francisco Chemical Co., among other things, stated:

“That they are already owners of a certain placer known as the Waterloo placer, whose geological formation is identical with that included within the boundaries of said Lorine Lode.” They also call attention to the fact, “that prior to the time patent was issued for said Waterloo placer, a memorandum was written, respecting the formation of deposit included within its exterior limits \* \* \* and that in said memorandum said deposits were regarded as coming within the purview of the laws regarding placer claims,” etc.

It further appears that protestants submitted certain plats connected with the Waterloo claim and transcripts of certain testimony submitted in June and September, 1905, before an examiner in the case

of Charles C. Jones vs. William S. Goodfellow, et al, removed to the United States Circuit Court for the District of Idaho, involving an adverse claim filed by the lode claimant against the said Waterloo placer. It is further said:

“The testimony set forth in said transcripts has been heretofore gone over very carefully and epitomized in office memorandum of December 12, 1905, approved by the honorable commissioner, W. A. Richards, under date of December 27, 1905.” Again: “It is to be observed that the formation of the deposit contained within the said Waterloo placer is not now under consideration, and, further, that when it was under consideration it was specifically stated in said office memorandum of December, 1905, that while the deposit covered by the Waterloo might, without serious objection, be located and patented as lodes, it was perhaps better to consider them as placer deposits, thus conforming to the view of geologists. It may be stated in this connection that at and long prior to the time of the preparation of said memorandum of December 12, 1905, all of the entries for lands embracing phosphate deposits related to placer locations, and, further, that at the time of the entry of the land included within the said Waterloo placer limits there was not then existing any protest or adverse claim against the same. In other words, it was spe-

cifically stated in said office memorandum that the decision applied only to the Waterloo placer, and was not to be considered as an established precedent."

The circumstances under which the Waterloo placer patent issued was brought out by counsel for Appellee from the government report by Gale & Richards, and will be found (Rec. 396.) After referring to the fact that the Waterloo patent was granted as a placer, and the Bradley claims (Lorine et al) were subsequently patented as lodes. It is there said:

"As previously stated, prior to the granting of the Waterloo patent, all entries for phosphate lands were made in the Florida fields, and presumably covered deposits of true placer type, but it appears that the distinction between these deposits and the phosphate beds of the western field was, perhaps, not clearly brought out at that time."

Mr. Sullivan testified in relation to the Waterloo placer (Rec. 493, 501, 502) to the effect that Mr. Jones had lode locations over each of the placer locations exactly the same as the Duffield & Jeffs locations. That Mr. Jones relinquished or abandoned his lode rights "and permitted the locators to go ahead and patent this ground without protest." (Rec. 502.)

## CLAIMS ADVANCED BY APPELLEE.

With the deposit in place and position in the mass of the mountain between well defined walls, as the undisputed evidence shows, it remains to consider the grounds upon which the appellee relies (other than that the deposit is non-metallic) to take this mineral deposit out of the class of lodes and veins within the purview of Section 2320, Rev. Stat. To bring the matter directly to the attention of the Court, we now quote from the leading witness for the appellee, Mr. Fred B. Weeks, late of the United States Geological Survey. (Rec. 275.)

He testified that the general dip of the strata on the claims is from twelve to thirty-five degrees to the west, strike north and south. (Rec. 570, 571.) That he followed the outcrop of the lower phosphate bed and noted its position on Defts. Ex. 2 by heavy black line. (Rec. 529-530.)

"Q. What do you find there from your examination in the way of the underlying rock?

A. The underlying rock is a silicious limestone.

Q. And on top of this silicious limestone what did you find?

A. The phosphate series.

Q. Of what thickness?

A. About 120 feet thick, I think the entire series is.

Q. And it varies, does it not?

A. Well, I couldn't say as to that, because

there are very few places where the entire thickness is shown; but I am giving it where I have measured it, where it is exhibited.

Q. And on top of this series what is there?

A. Cherty limestone.

Q. Forming the upper boundary? '

A. Yes, sir.

Q. Within this series what do you find? (Rec. 589.)

A. A series of phosphate beds, and limestone and shale.

Q. Can you tell us how silicious some of the dividing beds are in this phosphate series?

A. That I couldn't say. They probably contain some silica, but not in any considerable amount so that one would call a layer within the phosphate series a silicious limestone.

Q. Now, in both places you found this phosphate series, bounded as you have described, in place in the mass of the mountains, did you not?

A. It is in place exactly as the overlying and underlying rock are in place in the mountain.

Q. And it is in place as much as any other rock is in place in the mountain, is it not—can be in place?

A. Yes, sir—in that way.

Q. Well, is there any question in your mind about it being in place?

A. Oh, I don't think so.

Q. What do you understand by a lode?

A. A lode would be a rock mass containing



metallic minerals. It may be that it has some distinct form, and it may have a very irregular form.

Q. It must contain a metallic mineral?

A. Yes, sir. (Rec. 590.)

Q. Would you agree with this definition of a lode or vein, namely: as a body of mineral, or mineral body of rock, within defined boundaries, in the general mass of the mountain? (No answer.)

(The last question was repeated.)

A. No, sir.

Q. Wherein do you differ? (Rec. 591.)

A. It might be mineral-bearing without containing metallic minerals.

Q. That is the only difference?

A. Yes, sir.

Q. In the ground under consideration in these several cases, do you find any conditions not complying with the definition I have just asked you about?

A. Yes, sir.

Q. What?

A. They don't contain any metallic minerals—

Q. I will read you again: Supposing that a vein or lode is a body of mineral or mineral body of rock within defined boundaries in the general mass of the mountain; would you say that the deposit or deposits in question come within such a definition?

A. They do not.

Q. In what respect do they differ?

A. They differ in respect to its metallic contents; but the definition you have given is not a

comprehensive definition of a vein; therefore this deposit varies from the proper definition of a vein.

Q. I am asking you upon the definition I gave you, whether proper or otherwise. If you don't understand it, the Reporter will read it.

A. I think I understand it. My statement is that it differs from it because of its lack of metallic contents. (Rec. 592.)

Q. Well, taking the definition as I have given it to you, wherein do you distinguish this deposit or these deposits under consideration?

A. The phosphate deposits do not contain any metallic minerals—ores.

Q. Well, inasmuch as the question I have asked does not imply any metallic mineral, wherein (I ask you again) does the deposit or deposits under consideration fail to come within the definition suggested?

A. I don't see that I can answer your question more specifically than I have already stated;—because it lacks in metallic constituents.

Q. It is leaving out entirely, Mr. Weeks, metallic constituents; and leaving that out, wherein is there any difference?

A. The phosphate deposit is a mineral-bearing rock, and in this case it agrees with the definition you suggested. (Rec. 593.)

Q. This deposit is a continuous body?

A. Yes, sir. (Rec. 594.)

Q. Suppose that five feet in width or thickness of this phosphate rock, instead of being found

lying in place, conformable to the stratification, existed in a fissure, cutting the beds; what would you say as to the fissure so filled constituting a lode or vein? (Rec. 600.)

A. I couldn't say anything about it, because it is simply a physical impossibility for this bed to have occupied any such a position.

Q. Assume, notwithstanding, that it did; please answer.

A. Well, your assumption is absurd from my standpoint, and therefore I cannot use it. When I say that it cannot exist under those conditions, why I don't see how I am going to assume anything about it.

Q. You have testified this morning to a fissure cutting the bed filled with gilsonite, or asphaltum, or some hydro-carbon, it makes no difference what; have you not?

A. Yes, sir.

Q. Now, just assume that that fissure, of the width or breadth of five feet, was filled with this material.

A. Well, the fact is, that such a fissure cannot be filled with this material.

Q. Suppose it was; what would you say as to it being a lode or vein?

A. I haven't anything to say of such a supposition. It is unreasonable.

Q. In what respect is it so unreasonable that you cannot answer?

A. Because you couldn't fill a fissure with this material. (Rec. 601.)

Q. Assuming such a condition to actually exist, and assuming that such a condition did exist; wherein would it not be a lode or vein, in your opinion?

A. I don't care to make an answer to an unreasonable supposition. I consider that so unreasonable that I can't answer it.

Q. Now, supposing that this deposit, in the form it is now found, was valuable for gold or silver or copper or lead; what would you say as to it being a lode or vein?

A. I think it would depend upon the form and character of such a deposit of gold or silver or lead, or other materials that I mentioned, as to whether I would consider it a vein or lode. (Rec. 603.)

Q. I say, sir, in the form and character in which this deposit is now found, as you have described it, with strike and dip, in place, between walls, in the body of the mountain?

A. I don't think, if it occupied the same position and occurred in the same form and character as this phosphate bed, that it would be a vein or lode.

Q. It would be a placer, would it?

A. No; I shouldn't term it a placer in the true—(Rec. 604.)

Q. What would you term it?

A. I don't know of any distinct name you could call it, other than a bed, if it existed in the same form and character as this does.

Q. Wherein would it not be a vein or lode, in your opinion?

A. Because it is the original deposition of the material in the place in which it was formed.

Q. This gold or silver or copper or lead matter?

A. Yes, sir. (Rec. 604.)

Q. Assume that this deposit that dips 85 degrees that you have described, consisted of apatite instead of the present—of the materials that you have described here; what would you say as to whether or not it would be located as a lode or vein? (Rec. 607.)

A. If this material comprising this bed of phosphate was composed entirely of apatite, in its crystalline form, it would be a mineral-bearing deposit.

Q. Would it be a ledge or vein, in your opinion, and locateable as such? (No answer.)

Q. We are waiting.

A. Yes, sir, I understand. I think there are conditions under which this bed, as a whole—composed entirely as a whole of the mineral apatite, might be located as a vein or lode.

Q. Properly so, in your opinion?

A. Yes, sir.

Q. And I will ask you now the same question, substituting in the place of apatite, paramorphite?

A. It might be.

Q. Why do you say 'might be'?

A. Well, there might be a difference of opinion

about it, in my opinion. As I said, under proper condition it probably would be, or could be.

Q. And your opinion is that it would be proper to locate it as a lode or vein?

A. When I answered yes to that question, my answer was under the supposition that this whole bed represented by the phosphate would be represented by the mineral form paramorphite, as you suggest.

Q. That was the question. That is to say, of economic or commercial value?

A. Yes, sir.

Q. Isn't phosphorite an allotropic form of apatite? (Rec. 608.)

A. Phosphorite is a variety of apatite, which has a given density, form, and its particular structure being fibrous, or radiating.

Q. Assume now, if you please, that this deposit, with the dip, strike, position and place as you have described it, was phosphorite; in your opinion would it not be properly located as a vein or lode?

A. Bearing in mind that the whole bed is to be made up entirely of the variety of apatite called phosphorite, it would be located as a vein or lode.

Q. I wish you would, if you can, answer the question without any further assumption than the question conveys.

A. Well, I am answering it with that in mind that I have stated.

Q. Can you answer the question yes or no?

A. No, sir.

Q. Why?

A. I don't think it can be answered that way.

Q. Well, why?

A. It would not be a proper answer.

Q. Why not?

A. Because your answer would be incorrect, if you said yes or no.

Q. Tell us why.

A. I don't see how I can go any further.

Q. You can't explain why it would be incorrect?

A. Other than what I have said. (Rec. 609.)

Q. Now, Mr. Weeks, a miner or a prospector desiring to make a location, finding a valuable deposit of mineral in the mass of the mountain, with a regular defined dip and strike, and between walls of sedimentary formation; what additional facts would you have to have to determine—before he could intelligently determine whether it was a lode or vein subject to location as such?

A. I think it would be necessary for him to determine from the examination of the bed, whether it had or had not the characteristics of a vein or lode. (Rec. 612.)

Q. That fully answers the question, does it?

A. Why, there might be other considerations; I think that is the principal one—the determining factor.

Q. Well, is there any other, in your opinion?

A. I think that covers the ground.



Q. If the prospector found that the mineral deposit conformed to the stratification; then it is your opinion, is it not, that it is not a lode or vein?

A. It would in most cases wherein the vein or lode would follow along the bedding-planes between the sedimentary strata.

Q. Any other exception?

A. I think not.

Q. Now just illustrate what you mean by the exception you have just given?

A. Where the mineral-bearing solutions, penetrating the strata of the earth's crust, instead of cutting across a bed finds the point of least resistance along the bedding-planes between these beds—would constitute the principal example.

Q. In other words, the prospector would have to determine as to the action of the mineral-bearing solutions; is that it?

A. He would determine that from his observation of what the material itself said.

Q. That would be one of the things he would have to determine?

A. Yes, sir; and he would determine it in that way.

Q. He would determine it in what way?

A. By his observation.

Q. Of what? (Rec. 613.)

A. Of the bed of the material he was examining.

Q. What observation would be necessary to make that determination?

A. Why, he would find an exposure of the material that the ore-bearing horizon was following the line between two sedimentary strata—an observation not very difficult to make.

Q. Well, if he found that would it be a vein or a lode?

A. Yes, sir.

Q. It would be?

A. Yes, sir.

Q. Then in your opinion it would be necessary—it would be limited only to deposits formed from solutions?

A. A vein or lode would be.

Q. In other words, the prospector in such a case would have to determine the source from which the mineral came, would he?

A. No, sir.

Q. He would not be?

A. No, sir.

Q. The manner in which it came?

A. In a sense, yes, in that the mineral-bearing solution had followed along this bedding-plane, would be the manner in which it came into its place.

Q. Then in a sense it would be necessary to determine the manner in which the mineral solution came?

A. Yes, sir.

Q. If they came and were deposited by such action, it would be a vein or lode, in your opinion?

A. Yes, sir.

Q. If on the contrary it came by having been

placed where it is before the period of the uplift, or deformation, it would not be a vein or lode; is that right? (Rec. 614.)

A. I don't quite see that connection. Will you read that?

(The last question was repeated.)

A. I don't think so.

Q. It would still be a vein or lode?

A. Yes, sir, it might be.

Q. It might be?

A. Yes, sir.

Q. Why do you say 'might' in that connection?

A. Well, I will say it is.

Q. Yes—a vein or lode?

A. Yes, sir.

Q. Then, if I understand you, if at any past period, whatever position it might have occupied, the mineral deposit came in solution and was deposited, forming beds, it would at the present time be a lode or vein? Is that it? (No answer.)

Q. In other words, to make it a little clearer, is it of any importance, in your opinion, the determination of when the mineral deposit was formed?

A. It is of importance in this sense, that the mineral-bearing solutions from which the minerals are deposited, enter into a rock already formed, and that the formation of such ore-zones are later than the materials which the ore-bearing solutions are penetrating.

Q. Then it is your opinion that a prospector, in determining whether the deposit found in the

form you have described to be the one involved in these cases, is a vein or lode and locateable as such, he must determine whether it was filled with the mineral substances—whether it has been originally rock that (Rec. 615) has been subsequently filled with mineral substances; is that it?

A. Yes, sir.

Q. How would that be determined by the miner—the ordinary miner and prospector?

A. In the ordinary vein or lode from the outcrop the prospector could determine more or less accurately the boundaries of his vein or lode, and the fact as to whether the ore had come into such rock subsequent to the formation of the country rock.

Q. He would know all about it, eh?

A. Oh, I don't know that he would know all about it. He would from the general observation he would make, I think. In fact, I have talked with many prospectors who have exhibited such a knowledge. (Rec. 616.)

On re-direct examination (by Mr. Budge) this witness testified:

Q. Now, Mr. Weeks, on cross-examination you stated, if I remember the testimony correctly, that if there were a fissure containing apatite, or a deposit of apatite—a fissure containing this apatite in its entirety—that it would probably be a vein or lode; but if it contained only a portion—of phosphorite, instead of apatite—contained only a portion of phosphorite, that you thought it would not be a vein

or lode. I want to ask you if you desire to correct your testimony in that respect?

A. I think I was considerably confused in answering those questions; and what I would say at the present time is, that if a fissure containing or made up of this phosphorite in its entirety, it would not be located as a vein or lode, because it was not metallic, and because it did not contain any gangue mineral or material from which the valuable part would be extracted.

Q. But would be mined as a whole?

A. Yes, sir. But if the fissure was formed of phosphorite (Rec. 741) in part and contained other materials from which the phosphorite would be extracted, it might be a question then as to whether it should be located as a vein or lode.

Q. What is the probability, as compared if the whole fissure was phosphorite?

A. Why, there would not be that doubt in my mind.

Q. There would not be the same doubt?

A. No, sir.

Q. For what reason?

A. Well, for the reason that the fissure being completely occupied by this phosphorite, the material would be mined as a whole, and there would be no gangue present from which to extract the valuable material." (Rec. 742.)

Mr. Breger, a witness for appellant, who examined the ground in question, corroborated the

testimony of Mr. Weeks as to the nature of this formation, the underlying bed and overlying bed as correct in its essential features. (Rec. 672-3.)

Mr. Bell, another witness for appellee, testified. (Rec. 791-3):

“Q. Well, what characteristic of a vein do these deposits lack, except the metallic character of the contents?

A. Why, the principal characteristics that they lack is a decided absence of a selvage separating the valuable mineral from the wall rock, together with the unaltered condition of the wall rocks, which remain practically as they were consolidated when they were laid down. If it were a vein or a lode those conditions would not be manifested in their original form; they would be altered by the action of acid solutions leaching the rock, replacing it with silica, or dissolving it out and replacing it with something else, some other form of mineral, and there would be an altered condition of the primary sedimentation. But where it has those primary conditions—the unaltered fossils are still there the way they were laid down; the fossil rock, apparently, from its oolitic structure, shows the concentric wave action, of motion, of rubbing together of the grains, and the underlying basal limestone, where exposed at the surface, shows weathered outlines of fossil shells. I don't know of any lode or vein deposit that shows those unaltered conditions.

Q. The rocks below and above this deposit are clear and distinct from the phosphate beds, are they not?

A. Yes, sir.

Q. And your idea is that these wall rocks must be altered in character, especially close or next to the deposit, in order to constitute a vein?

A. They almost invariably are, in a lode or vein deposit.

Q. Is it necessary that they should be?

A. It is to my mind necessary that they should be changed from the original sedimentation forming the walls or veins."

Summing up the claims of Mr. Weeks and other witnesses for appellee, why the zone of phosphate-bearing rock is not a lode or vein, they are: (1) non-metallic mineral; (2) because it is the original deposition of the material in the place in which it was found; (3) because not formed as veins and lodes are ordinarily formed, and (4) wanting in some characteristics common to many veins and lodes.

There is nothing in any of the several claims of appellee that changes the status of this mineral deposit from being lawfully acquired as a lode location under Sec. 2320, U. S. Rev. Stat.

The problems of the origin and formation of such mineral deposits are complex. Numerous theories have been advanced, but it remains one of



mystery. Discussions would seem to be profitless here since there are no legal questions in connection therewith.

To this claim the author, in Note 1, p. 510, 1st Lindley on Mines (2d Ed.) says:

“The acts of congress are so construed as to include in the category of lodes, veins, and ledges certain deposits which would not fall under the above definition. As, for example, certain tilted beds or sedimentary strata containing ores as original constituents, and not formed by subsequent fissuring and mineralization. The geologist would call these beds, and not lodes, but we understand that the intent of the law is not to make distinctions based upon the genetic principle. It is doubtless true that a very small percentage of the ore deposits of the precious metals occur as tilted beds in place, unassociated with subsequent fissuring and mineralization; but when such are found, they are undoubtedly subject to location as veins or lodes within the meaning of the statutes.”

In *Stevens vs. Williams*, 1 Morr. Min. R., 557, 559, Federal Cases, Vol. 23, No. 13414, Judge Hallett says:

“As to the word **vein** or **lode**, it seems to me that these words may embrace any description

of deposit which is so situated in the general mass of the country, whether it is described in one way or another; that is to say, whether in the language of the geologist, we say that it is a bed, or a segregated vein, or gash vein, or true fissure vein, or merely a deposit; \* \* \* whenever a miner finds a valuable mineral deposit in the body of the earth, as I have described it, he calls that a lode, whatever its form may be, and however it may be situated, and whatever its extent in the body of the earth. The books make some distinctions between beds and lodes, and they make distinctions in the different classes of veins \* \* \* **but these distinctions are not important in relation to this matter of the discovery and taking of these mineral deposits.** It has been decided that congress, in passing this act, intended by this description to embrace and include all forms of deposit which are located in the general mass of the mountain, by whatever name they may be known, and the distinctions which are adopted by geologists in respect to the different kinds of veins are not important except for one question and for one purpose, which I may invite your attention to further on. So that we may say, gentlemen, with respect to the case which is now before you, that, whether this may be called a true vein or a contact vein, or a bed; whether it lies with the stratification or transversely to it, the mat-

ter is of no importance for the purpose of determining this question; it is in any event a lode, if it lies in place, within the meaning of this act. And it is in place if it is inclosed and embraced in the general mass of the mountain, and fixed and immovable in that position."

In *Jones vs. Prospect M. T. Co.*, 21 Nev. 339, 351, the court says:

"The manner in which mineral was deposited in the places where it is found is, at the best, but little more than a matter of mere speculation, and to attempt to draw a distinction based upon the mode or manner or time of its deposit would be utterly impracticable and useless. The question was long ago settled by the courts. In *Stevens vs. Williams*, 1 Morr. Min. R. 557, Hallett, J., said: 'And when this act speaks of veins or lodes in place, it means such as lie in a fixed position in the general mass of country rock, or in the general mass of the mountain. As distinguished from the country rock, this superficial deposit may have been brought into its present position by the elements; may have been washed down from above, or may have come there as aluvium or diluvium, from a considerable distance. Now, whenever we find a vein or lode in this general mass of country rock, we may be permitted to say that it is in place, as distinguished from the superficial deposit, and that is true whatever the character of the

deposit may be \* \* \* It is in place if it is held in the embrace, is enclosed by the general mass of the country.'

"Upon the second trial of the same case (Id. 569), Justice Miller said: 'And there I want to say that by rock in place I do not mean merely hard rock, merely quartz rock, but any combination of rock, broken up, mixed up with minerals and other things, is rock within the meaning of the statute.' And again, in *Mining Company vs. Cheesman*, 116 U. S., 529, 537, the court said: 'Excluding the waste, slide or debris on the surface of the mountain, all things in the mass of the mountain are in place.' (See also, the same case in the circuit court, 2 McCrary, 191; *Hyman vs. Wheeler*, 29 Fed. Rep. 353; *Cheesman vs. Shreeve*, 40 Fed. Rep. 787)."

In *Hyman vs. Wheeler*, 29 Fed., 347, 353, and *Cheesman vs. Shreeve*, 40 Fed., 787, 795, it is laid down:

"With ore in mass and position in the body of the mountain, no other fact is required to prove the existence of a lode or the dimensions of the ore. As far as it prevails, the ore is a lode; and it is not at all necessary to decide any question of fissures, contacts, selvages, slickensides, or other marks of distinction, in order to establish its character."

The legal conclusion will be found clearly and accurately summed up in Martin's Mining Law, Sec. 55, as follows:

“UPON AN ISSUE TOUCHING THE EXISTENCE OF A LODGE OR VEIN at a given place, a question whether there exists one characteristic usually attending the existence of such lode, or another, is a part only of the main question, and, in the presence of other unquestioned elements establishing its existence as a lode or vein, the presence of such characteristics becomes immaterial. For instance, if ore exists in mass and position in the body of a mountain no other fact is required to prove the existence of a lode of the dimensions of the ore so found in mass and position; as far as it so prevails, it is a lode, whatever may be its form or structure, and it is unnecessary to inquire as to or to decide any question of the existence of a fissure, a contact, selvages, or other marks which usually attend the existence of a lode. An impregnation, to the extent to which it may be traced as a body of ore, is as fully within the terms of the act of congress as any other form of deposit, whether it be in the form of a broken mass of limestone, between regular walls of the same rocks, or a part of such strata in solid formations mineralized by the replacement of some of their constituent parts with valuable metals, the result is the same. The existence

of a lode cannot be determined by classifying it as a segregated or contact fissure-vein, or as a bed of ore; or by ascertaining whether the ore is separated from the country-rock by planes or strata visible to the eye."

The settled, practical and sensible construction placed upon the congressional acts for determining to which of the two classes of mineral deposits a given valuable mineral deposit belongs and can be legally acquired is emphasized by a perusal of the testimony of Mr. Weeks, the principal witness for the appellant, and reflects the wisdom of the rule established.

By that rule, a knowledge of the many complex theories and conjectures in respect to the origin and time of occurrence of a valuable mineral deposit; of the nature and mode of aggregation of its mineral contents; of the exact and profound science in relation to the chemical analysis and composition of geological formations; of criteria based on comparisons with characteristics common to many veins or lodes; of the name by which it is called by geologists or others; of the uses to which the mineral may be applied; etc., etc., are each and all excluded and eliminated.

By that rule, the criterion primarily is the **form** in which the valuable deposit is found. If in rock in place in the mass of the mountains, i. e., within defined boundaries, it can be legally acquired **only** by means of a lode location; if, on the contrary, the

valuable deposit is not in rock in place, but is a loose deposit of mineral upon or near the surface, then such deposit can be legally acquired only by means of placer locations embracing the ground upon or within which the same is found.

## ORIGIN.

If, however, the question of origin is deemed material, we are compelled to disagree in toto with the theory set forth in appellant's brief.

The testimony bearing upon the question of origin was exclusively given by the appellant's witness, Mr. Weeks (before referred to), and Mr. Breger, a young man 26 years of age, who said he became a professional geologist in 1903, at the age of 19 years, afterwards graduated at Cornell in 1906, at the age of 23 years. He was connected intermittently with the Geological Survey from 1903-5, and practically continuously thereafter until he became connected with the Mining World in December, 1910. (Rec. 663, 688-690.) He had visited the Rocky Mountain country twice, first in the summer of 1909, and again in 1910. He prepared a report on "The Salt Resources of Idaho and Wyoming," also with Mr. Gale and Mr. Richards he participated in the preparation of a report on the phosphate deposits, and in writing it in part, which report he produced, being Official Bulletin 430-H. U. S. Geological Survey. (Rec. 691-2.)



Briefly epitomized from the testimony in this case, the data relating to this point is as follows:

Phosphorite, the particular ore of phosphorus dealt with in this case, is by standard authorities a massive variety of apatite of various physical characteristics. (Rec. 609.)

Dana, in his great work "A System of Mineralogy" (page 762), so defines it.

On page 764 he states, "Ordinary apatite is fluor-apatite containing fluorine, often with only a trace of chlorine."

When shown the statement in Encyclopedia Britanica, Vol. 18, Ed. of 1898, pages 817, et seq., the witness, Mr. Weeks (Rec. 658-9), testified:

"I have never seen this statement before, but—

Q. You find it there, do you?

A. Yes, sir.

Q. What is phosphorites?

A. The plural of phosphorite?

Q. Phosphorite?

A. Why, it is a chrystalline variety of the mineral apatite, of fibrous structure, containing chlorine (fluorine?).

Q. I read you this short definition from page 818 of this same work: 'Phosphorite is the name given to many impure forms of amorphous or massive apatite, modified more or less by disintegration. It occurs in massive, irregular, corroded looking nodules embedded in limestone or other kind of soft rock, near Amberg.'

A. I think that is an absolutely incorrect definition of phosphorite.

Q. You don't understand from your testimony given yesterday phosphorite to mean what I have just read?

A. No, sir, I don't understand it to mean that."

The appellant's testimony in regard to the chemical character of phosphorite ore is so at variance with the facts that special attention is called to it. In the record, at page 545, Mr. Weeks states that phosphorite always contains some proportion of fluorine, and that there is no fluorine in the ore in the deposit in question. In refutation of these statements we find in the record (p. 699) the following table:

# Analysis of Phosphate Rock From Wyoming, Utah and Idaho.

	1.	2.	3.	4.
Insoluble .....	10.00	1.82	9.40	2.62
SiO <sub>2</sub> .....	None.	.30	Not. det.	.46
Al <sub>2</sub> O <sub>3</sub> .....	.89	.50	.90	.97
Fe <sub>2</sub> O <sub>3</sub> .....	.73	.26	.33	.40
MgO .....	.28	.22	.26	.35
CaO .....	45.34	50.97	46.80	48.91
Na <sub>2</sub> O .....	1.10	2.00	2.08	.97
K <sub>2</sub> O .....	.48	.47	.58	.34
H <sub>2</sub> O .....	1.04	.48	.61	1.02
H <sub>2</sub> O + .....	1.14	.57	.75	1.34
TiO <sub>2</sub> .....	None.	None.	None.	None.
CO <sub>2</sub> .....	6.00	1.72	2.14	2.42
P <sub>2</sub> O <sub>5</sub> .....	27.32	36.35	32.05	33.61
SO <sub>3</sub> .....	1.59	2.98	2.34	2.16
F .....	.60	.40	.66	.40
Cl .....	Trace.	Trace.	Trace.	Trace.
Organic matter .....	Not. det.	Not. det.	Not. det.	Not. det.
	96.51	99.04	98.90	95.97

In every sample fluorine was found. Therefore the ore is phosphorite, or massive apatite, and it answers Mr. Weeks' requirement in this respect. As regards the physical features of phosphorite, on which Mr. Weeks lays great stress, we have but to consider the infinite varieties of the mineral lead carbonate, from the chrystalline to the amorphous state to realize how insignificant this distinction is.

Quibbling on fine points of definition is not

important; and we are in this case simply dealing with an ore of phosphorus in a massive form which is properly called phosphorite.

The rich ore in the vein in dispute is generally found as an oolitic layer lying on or near the barren foot wall. Between the rich ore and the barren hanging wall are a number of other layers of phosphorus ore of lower grade, much being of a shaly, amorphous, and earthy character, and not oolitic; and also layers of gangue material. On this point the testimony of Mr. Weeks is as follows: (Rec. 734.)

“Q. Throughout the intervening layers is there found tricalcic phosphate?

A. I think there is some tricalcic phosphate in all the intervening layers.

Q. In all the intervening layers?

A. Yes.

Q. Of some percentage?

A. Yes, sir, I think so.”

We have also on this same point in the testimony of Mr. Breger the table. (Rec. 694.)

## Phosphate Deposits in Idaho, Wyoming and Utah.

### Section of Phosphate and Associated Beds at Hot Springs, Idaho.

Field No. of Specimen		P <sub>2</sub> Os.	Equivalent to Ca <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub>	Thickness	
		Pr. Ct.	Pr. Ct.	Ft.	In.
	Limestone, compact, hard.....			10+	
141-A	Shale, brown, earthy, calcareous....	9.0	19.7	1	6
141-B	Shale, earthy, massive.....	2.0	4.4	2	8
141-C	Phosphate, oolitic, massive, dark gray .....	32.8	71.8	2	2
	Limestone, massive stratum .....			2	2
141-D	Phosphate, medium to coarsely oolitic, dark gray .....	32.3	70.7		11
141-E	Shale, brownish, earthy, calcareous.	3.5	7.7	1	
141-F	Phosphate, medium grained, oolitic dark gray .....	36.3	79.5	1	3
141-G	Phosphate In.				
	(a) Shale, calcareous .....	5			
	(b) Phosphate, oolitic, brownish. 4	27.5	60.2	1	10
	(c) Shale, brownish phosphatic.. 2				
	(d) Shale, brownish phosphatic.. 11				
141-H	Phosphate, medium to coarse grained Oolitic (main entry tunnel).....	29.1	63.7	5	10
141-I	Phosphate, medium to coarse grained including pebbly texture.....	28.0	61.3	1	5
141-K	Shale, phosphatic, dark brown, earthy .....	24.3	53.2	11	
	Limestone .....			1	
141-L	Shale, phosphate, dark brown, earthy	12.9	28.3+	10	6
	Shale, phosphate, dark brown, earthy			4	11
141-M	Shale, phosphatic, somewhat oolitic.	20.3	44.5	1	8
141-N	Shale, phosphatic, dark brown, earthy	5.2	11.4	4	6
				64	4

To further substantiate our position in regard to this matter, we give the following references to the record.

Record, page 623, from page 356, Vol. 47, of "A Treatise on Metamorphism by Prof. C. R. Van Hise."

“Occurrence—Apatite is one of the most wide-spread, if not the most wide-spread, of all the subordinate constituents of rocks. It is a common, if not an almost universal, constituent of the plutonic rocks, occurs almost as broadly in the volcanic rocks, and is found in many varieties of unaltered or little altered, sedimentary rocks, such as limestone, shales, sandstones, etc.; and, finally, it is almost everywhere found in the metamorphosed, igneous, and sedimentary rocks.”

Record, page 580:

“Q. Mr. Weeks, how does this compare—how does this phosphate rock compare, so far as its oolitic structure is concerned, with limestone deposits?

A. There are very many beds of limestone which are formed of oolites in the same way that I have described the formation of these oolites, and they show in thin sections the same structure as the oolites of the phosphate beds. The oolites of the limestones are calcium carbonate; and the oolites of the phosphate bed are calcium phosphate.”

Record, p. 622:

“Also the moderately strong acids  $\text{H}_2\text{SO}_3$ , and  $\text{H}_3\text{PO}_4$  are not abundant, although phosphoric acid is rather widespread.”

Record, p. 624:

“The depletion of the surface rocks in apa-

tite would seem to furnish an adequate source for the apatite in veins, this mineral being taken into solution near the surface and redeposited deeper down, thus being transported from the belt of weathering to the belt of cementation."

Record, p. 626:

"The general principle applicable to most cases appears to be that the phosphates are dissolved by descending waters in the belt of weathering and thrown down on reaching the belt of cementation. Usually the latter reaction takes place in the upper part of the belt of cementation, so that the phosphates are segregated at or just below the level of ground water. The precipitation of the phosphates is especially likely to occur in limestone."

Record, p. 628-9, Mr. Weeks further testified:

"Q. The question I am trying to get an answer to is this: whether or not there are not different theories as to the origin of the phosphate beds?

A. That is true, because the different beds of phosphate have a different origin and mode of formation. That is the reason that makes the difference in the ideas as to their formation.

Q. Then there is a difference?

A. Yes, sir."



Record, p. 699, et seq., Mr. Breger testified:

"I call your attention to page 7 of this report and bulletin of the government, and under the heading 'Source of Phosphoric Acid,' it is stated: 'An entirely satisfactory explanation has not yet been given of the source or manner of accumulation of the phosphoric acid'—is it not?

A. Yes, it is so stated there. I would lay emphasis on that, if I may, that at the time—

Q. Well, never mind. Your counsel will ask you if there is anything to emphasize—after a while. I next call your attention to the following, found on page 22 of this report, where it is said: 'The occurrence of rounded or oval limestone nodules, ranging from a few inches to several feet in diameter, is a characteristic feature in the phosphate beds and the phosphatic shales. They consist of very dense, compact, fine grained limestone, having a foetid odor when struck with a hammer, but showing a low percentage of phosphoric acid whenever tested, as all the dense, fine grained limestone tested we found to run very low in phosphoric acid, tests of these rocks were abandoned in the latter part of the season's work.' That is the fact, as the examination of your party up there showed that summer?

A. No, sir.

Q. Is it not?

A. Except 'The occurrence of rounded or oval limestone nodules, ranging from a few inches to several feet in diameter, is a characteristic feature in the phosphate beds and the phosphatic shales'

should be modified to mean the phosphatic beds and all the phosphatic shales other than the principal phosphate beds.

Q. Why didn't you modify it when you went over this report?

A. I didn't write that; and besides, that is a very minor and technical point, that there were so many divergent—

Q. You assisted, you stated, in the preparation of the work, and in the preparation of this report?

A. Yes, sir.

Q. And now you want to qualify it?

A. I have no responsibility for that report myself. My name does not appear in the authors.

Q. Did you suggest it being changed at the time?

A. No, sir; the point didn't occur to me at the time."

Again (Rec. 706-7), we find the following:

"Q. On page 63 I find the following: 'The most massive or less shaly material and that most coarsely oolitic is considered the best ore. The rock of the workable bed is dark gray when freshly taken out, drying to a light gray in the air. It is of fine to medium and in part coarsely oolitic texture, and shows both massive and shaly structures.'

A. May I refer back to what that refers to?

Q. Sure?

A. Yes. This word 'ore' here is used in a general and very loose sense, and not at all in a technical sense; besides which, I remember that this statement was given to us by some of the men on the ground. The fact that the miners consider the shaly material, or the most coarsely oolitic, the best ore, is not determined primarily by the geologists, but they took the word of the men there, and there was nothing to contradict that. The word 'ore,' as a matter of fact, is used very loosely there."

From all the above, we conclude that a rational theory for the origin of this ore is that the phosphoric acid and phosphates, leached from the rocks above, by underground waters, and, reaching the favorable beds of oolitic limestones and shales (which now form the vein or lode in dispute, and which had a selective action for the phosphates), mineralized them by the simple interchange of bases (metasomatic action) between the phosphates and the carbonate of lime. We know this to be true of many ore bodies.

The denial of this theory of origin by the principal witness of the appellant, Mr. Weeks, should have no weight with the court owing to the woeful lack of chemical knowledge displayed by this witness. He says  $P_2O_5$  (phosphorus pentoxide) is phosphoric acid. Phosphoric acid is  $H_3PO_4$ . He states  $H_3PO_4$  is not carried in solution. It is so carried. He says arsenic and antimony are non-metals. They

are both metals. He does not know the composition of galena and calls cube galena the metallic form of lead. (Rec. pp. 732, 747, 748.)

Mr. Breger's testimony lacks the ring of sincerity when the origin of the ore is considered. His wholesale denial of the carefully prepared government report when in his opinion it would conflict with the interests of the appellee is a sufficient comment on the value of his testimony in this line.

The position we have taken with respect to the origin of this vein or lode of phosphorus ore is confirmed by such eminent authorities as—

Dr. Thomas Sterry Hunt, in his *Chemical and Geological Essays* (4th Ed.), page 222.

The learned author says:

“Ordinary soils contain only a few thousandths of this element, yet there are agencies at work in nature which gather this diffused phosphorus together in beds of mineral phosphates and in veins of crystalline apatite, which are now sought to enrich impoverished soils.”

## USES OF PHOSPHORUS.

Appellee claims calcium phosphate is used as a fertilizer and for no other purpose. Mr. Weeks (Rec. 545), testifies:

“Q. What is this calcium phosphate mined for?

A. For its use as a fertilizer to enrich the ground.

Q. And is that the only use to which it is put at this time?

A. Yes, sir.

Q. And for what constituents that it contains is it valuable?

A. Calcium phosphate."

In refutation of this statement and to fully understand the many uses to which phosphorus, the valuable constituent of calcium phosphate, is applied, we have but to read the testimony of the same witness on cross-examination. (Rec. p. 658-661):

"Q. It is the combination of phosphoric acid and tricalcic, or lime, that gives it commercial value, is it not?

A. Yes, sir.

Q. Without that union or combination these deposits in question would not have commercial value?

A. No, sir.

Q. And that combination of the mineral is in the Encyclopedia Britanica under Phosphorite, is it not?

A. I don't think so. It is the chemical compound of calcium phosphate and phosphoric acid—it should be.

Q. Isn't there such a thing known as metallic phosphorus?

A. I don't know of any such a thing.

Q. You never heard of it?

A. I don't recall it.

Q. I call your attention to the Encyclopedia Britanica, Volume 18, Edition of 1898, page 817, which I wish you would look at, and then answer the question if there is any such a thing known as metallic phosphorus?

(The witness examined the same.)

A. I have never seen this statement before, but—

Q. You find it there, do you?

A. Yes, sir.

Q. You find it there?

A. Yes, sir.

Q. What is phosphor bronze?

A. I don't know.

Q. You have never heard of that, have you?

A. Oh, I have heard it, but I don't know it.

Q. This encyclopedia, at page 817, under that heading, says: 'This name has been given to a class of useful metallic substances produced by the chemical union of either pure copper or of copper alloys with phosphorus.' That is entirely new to you?

A. I think so. I don't recall it under that name.

Q. I will ask you what is meant by the chemical formula,  $P_2O_5$ ?

A. Phosphoric acid.

Q. And what?

A. Phosphoric acid. That is the chemical formula for phosphoric acid?

Q.  $P_2O_5$ ?

A. Yes, sir.

Q. That means two parts—

A. —of phosphorus—

Q. —and five of—

A. —of oxygen.

Q. Now, you have testified about the uses and the use of this material found in these deposits?

A. Yes, sir.

Q. When did you visit the factories?

A. On June 15th, 1911.

Q. Where?

A. At Martinas, California.

Q. Well, whose building?

A. The factory of the San Francisco Chemical Company.

Q. I read you now from page 815 of the same encyclopedia, under the heading, 'Manufacture:' 'For the manufacture of ordinary phosphorus any kind of phosphate of lime might be used, and in fact, mineral phosphates are used occasionally.' Is that the fact, as you understand it?

A. Yes, sir, as I understand it.

Q. 'Although bones are often resorted to?'

A. Yes, sir.

Q. This deposit could be used in that way?

A. I think so.

Q. You really know that, don't you?

(No answer.)



Q. You really know that?

A. That it could be used?

Q. Yes?

A. Oh, yes.

Q. Now, the use is in some of the arts and industries, and in the medica materia?

A. Yes, sir." (Rec. 661.)

We believe this is sufficient to show to the court that the phosphorus in this ore is the real valuable constituent for a great many purposes.

## CONCLUSION.

That the deposit is a vein or lode when considered under the Act of Congress as construed by the courts, is clear and undoubted. The witnesses for appellee do not contend that the mineral deposit is a placer (Rec. 687, 604), their only claim is that it is **not** a vein or lode as understood by geologists. The scientific and technical definitions of the term "lode" or "vein" by geologists and lexicographers were long ago discarded by the courts in construing the Congressional mining Acts, and a broad construction applied to the term "vein" or "lode." Eureka case, 4 Saw., 302, when Mr. Justice Field decided that the term "lode" as used in the Acts of Congress is applicable to any zone or belt of mineralized rock lying within boundaries clearly separating it from the neighboring rock.

Appellants in making and maintaining their lode locations have done only that which the law permits and in a manner authorized by law. On the other hand the acts of appellee are not commendable. It is seeking to obtain title to the mineral deposit for one-half of the government price. It had notice long ago when the Waterloo placer patent issued, simply upon ex parte hearing, that the deposit "might without serious objection be located and patented as lodes" and that when that patent issued it was specifically stated that it "was not to be considered as an established precedent." If the appellee had any honest doubt as to whether the deposit might be legally located and acquired as lodes or as placer, it had the option to maintain, not only its placers but the old lode locations; and this too, undoubtedly, at the same annual expense. That option was capriciously ignored until it was too late.

We respectfully submit that the decree appealed from should be reversed and that a decree be directed to be entered in favor of the appellants for the conflict area as prayed for in their amended bill of complaint.

A. B. GOUGH,  
A. L. HOPPAUGH,  
C. B. JACK, and  
CHARLES C. DEY,  
Counsel for Appellants.

## APPENDIX.

SECRETARY'S OFFICE  
DEPARTMENT OF THE INTERIOR.

In re

HARRY LODGE MINING  
CLAIM.

Dec. 7, 1912.

"N"

N. E. 01635

Salt Lake City, Utah.

Instructions.

The Commissioner of the General  
Land Office.

Sir: The Department is in receipt of your letter of February 19, 1912, submitting for instructions, pursuant to departmental order of June 30, 1910, the matter of mineral entry 01635, made August 31, 1909, for the Harry Lodge mining claim, situate in the E.  $\frac{1}{2}$  Sec. 7; W.  $\frac{1}{2}$  Sec. 8, T. 11 N., R. 8 E., S. L. B. M., Salt Lake City, Utah.

This claim was located October 31, 1907, by M. S. Duffield, et al, the present entrymen, on account of a deposit of rock phosphate disclosed therein. Subsequently to such location and on December 9, 1908, the township wherein the claim is situated, was, by departmental order of that date withdrawn from all forms of location and disposal, subject, however, to valid existing rights. By executive

order of July 1, 1910, the said departmental order of withdrawal was, in so far as it included lands described in said executive order—ratified, confirmed, and continued in full force and effect; and subject to all of the provisions, limitations, exceptions and conditions contained in the Act of Congress entitled “An Act to authorize the President of the United States to make withdrawals of public lands in certain cases,” approved June 25, 1910, there is hereby withdrawn from settlement, location, sale, or entry and reserved for classification and in aid of legislation affecting the use and disposal of the phosphate lands belonging to the United States, all those certain lands of the United States set forth and particularly described as follows, to wit:

T. 11 N., R. 8 E., Secs. 4 to 9 and 16 to 21, inclusive; Secs. 30 and 31.

You report that:

“The application proceedings appear to be regular in all respects, the only question in the case being as to the patentability of the land; and, if patentable, whether as a **lode** claim, as applied for and entered, or under the laws pertaining to **placer** mining claims.”

In the case of Henderson, et al vs. Fulton (35 L. D., 652, 662), it is said:

“It may well be further stated, as a proposition equally supported by the authorities, that the amount of land which may be located as

a vein or lode claim and the amount which may be located as a placer claim, and the price per acre required to be paid to the Government in the two cases when patents are obtained, and the rights conferred by the respective locations and patents, and the conditions upon which such rights are held, differ so materially as to make the question whether mineral lands claimed in any given case belong to one class or to the other, a matter of importance, both to the Government and to the mining claimant. And, it is also true, mineral lands of either class can not be lawfully located and patented except under the provisions of the statute applicable to such class. Veins or lodes may be located and patented only under the law applicable to veins or lodes. Deposits other than veins or lodes are subject to location and patent only under the law applicable to placer claims."

And at page 685 of the same decision, it is said:

"It is apparent, also, that Congress had in mind and fully recognized, what experience had theretofore abundantly shown, that these two classes of mineral deposits are so different in their character and formation, and so completely separate and distinct from each other, that even when found to exist in the same superficial area, they may be located and held by different

persons, and patented accordingly (Sec. 2333). This principle has been recognized and followed in both judicial and departmental decisions (*Reynolds vs. Iron Silver Mining Company*, 116 U. S., 687, 695-7; *Aurora Lode vs. Bulger Hill and Nugget Gulch Placer*, 23 L. D., 95, 99-100; *Daphne Lode Claim*, 32 L. D., 513; *Jaw Bone Lode vs. Damon Placer*, 34 L. D., 72).

To the same effect also is the decision in *E. M. Palmer* (38 L. D., 294). See also *Clipper Mining Company vs. Eli Mining and Land Company* (194 U. S., 220, 228), and *Webb vs. American Asphaltum Mining Company* (157 Fed. Rep., 203, 206).

If, therefore, the deposit, on account of which title to the claim here in question is sought, exists therein in vein or lode formation, the area would be disposable only under the provisions of the lode mining laws. If, on the other hand, it be a placer deposit, and there be no lode within the limits of the claim, the lode laws would have no application, but the land would be subject to entry and patent exclusively under the provisions of the placer mining laws.

The claim is situated in the northern part of what is known as the Crawford Mountain area. The record in this particular case does not present such a description of the deposit as would enable the Department to intelligently determine its precise character. The claim, however, is shown to adjoin,

on its northerly end, the southerly end of the patented Lorine lode mining claim, and to be laid along a southerly extension of the outcrop of the same deposit, which, in a report filed in connection with the Lorine patent proceeding, was described by the mineral surveyor, who surveyed the latter claim. This description, which is deemed by the Department to sufficiently establish the character of the deposit disclosed on this claim, is as follows:

“The said deposit consists of a series of bedded veins of rock containing varying proportions of calcic phosphate. The individual veins of the series of veins vary in thickness from a few inches to ten or twelve feet. Only a portion of the veins contain rock sufficiently rich in calcic phosphate to be of commercial value, and only a portion of the veins are thick enough to be profitably mined, even when the contained proportion of calcic phosphate is sufficiently high. \* \* \* Physically, the higher grade vein rock occurring in the veins of the Lorine lode location is hard, its color is a grayish, bluish black. It is homogeneous in appearance, and is composed of small oolitic rounded grains cemented together by an extremely thin film of calcite and silica. \* \* \* Taken as a whole, the above mentioned series of bedded veins of phosphate rock and also each of the individual or separate veins of the series lies between, is conformable to, and is bounded by walls of rock, which wall rock is generally lime-



stone, but often is a very siliceous or cherty limestone, or a soft sandstone, or a shale or quartzite."

Here follows a sectional description of the phosphate beds disclosed in the tunnel on the claim:

"From the position of the hanging wall of the series of veins as exposed in the Lorine tunnel, the indications on the surface along the apex of the veins and the prominently outcropping footwall formation west of the mouth of the Lorine tunnel, I estimate the thickness of the series of veins, taken as a whole, from the contact of the easternmost vein of the series of veins with its hanging wall, to the contact of the westernmost vein of the series with its footwall, to be approximately 110 feet.

"As shown in the above descriptions, the individual veins of the series of veins of phosphate rock which exist in the Lorine lode locations, are separated from each other by strata of limestone, chert or shale. These separating strata vary in thickness from less than an inch to several feet. Taken as a whole, the series of veins lies between and is clearly limited and defined in extent and position by solid massive walls of hard siliceous limestone. Within the series of veins the separating strata limit and define the extent and position of the corresponding individual veins of the series, and are the walls of these individual veins. The strike and dip

of the veins and walls conform to each other throughout their entire extent within the Lorine lode location. I thus find that taken separately or as a series, that is, as a whole, the veins are obviously in place between walls, have a well defined dip, and strike and are an essential part of the mountain upon which the Lorine lode location is located."

This and co-related deposits in Bear Lake County, Idaho; Uintah County, Wyoming, and Rich, Weber and Morgan Counties, Utah, were in 1909 examined by Messrs. Hoyt S. Gale and Ralph W. Richards, geologists of the United States Geological Survey, the results of which examinations are given in Bulletin No. 430. As described by those gentlemen, the formations and the phosphate-bearing member thereof do not differ in any substantial particular from the formations and deposit existing upon the Lorine claim described by the mineral surveyor thereof.

Sections 2320 to 2328 of the Revised Statutes make certain provisions for the locating, working, holding and purchase of mining claims "upon veins or lodes of quartz or other rock in place, bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits." Sections 2329 to 2331 provide that claims usually called "placer," including all forms of deposit, excepting veins of quartz, or other rock in place, shall be subject to entry and patent under like circumstances and conditions and upon

similar proceedings, as are provided for vein or lode claims, but with wholly different provisions as to extra-lateral rights, area, survey, and price to be paid for the land.

If, therefore, the deposit here in question, which undoubtedly contains a valuable mineral substance, answers the description of a vein or lode of quartz or other rock in place, it is subject to disposition exclusively under the provisions of the lode land law. If not, then the placer laws alone are operative.

In the case of *Iron Silver Mining Company vs. Cheesman* (116 U. S., 529), the Supreme Court, page 533, said:

“What constitutes a lode or vein of mineral matter has been no easy thing to define. In this court no clear definition has been given. On the Circuit it has often been attempted. Mr. Justice Field, in the *Eureka* case (4 Sawyer, 302, 311), shows that the word is not always used in the same sense by scientific works on geology and mineralogy as by those engaged in the actual working of mines.”

After setting forth the court's definition in the *Eureka* case, the court says:

“This definition has received repeated commendation in other cases, especially in *Stevens vs. Williams* (1 McCrary 480, 488), where a shorter definition by Judge Hallett of the Colorado Circuit Court, is also approved, to wit:

‘In general, it may be said, that a lode or vein is a body of mineral or mineral body of rock, within defined boundaries, in the general mass of the mountain.’

In *Hays, et al, vs. Lavagnino* (53 Pac., 1029), it is held (Syllabus) that:

“In practical mining, the terms ‘vein’ and ‘lode’ apply to all deposits of mineralized matter within any zone or belt of mineralized rock separated from the neighboring rock by well defined boundaries, and the discoverer of such a deposit may locate it as a vein or lode. In this sense, these terms were employed in the several acts of Congress relating to mining location.”

In *Beale vs. Cone* (62 Pac., 948, 953), it is said:

“The controlling characteristic of a vein is a continuous body of mineral-bearing rock in place, in the general mass of the surrounding formation. If it possess these requisites and carry mineral in appreciable quantities, it is a mineral-bearing vein, within the meaning of the law, even though its boundaries may not have been ascertained.”

In the case of the *United States Mining Company vs. Lawson* (134 Fed. Rep., 769), which was affirmed by the Supreme Court (207 U. S., 1), it was held that a broken, altered, and mineralized zone of limestone lying between walls of quartzite

constituted a lode or vein within the meaning of the mining laws.

In *Duggan vs. Davey* (26 N. W., 887), a deposit of mineralized quartzite, a formation of purely sedimentary origin, about ten feet in thickness, inclosed between a stratum of limestone and a separate and distinct bed of quartzite, and having a dip of about 8 degrees, was regarded by the court as a lode or vein within the meaning of the mining laws.

In the case of *E. M. Palmer*, *supra*, the Department had before it for determination the question as to whether a deposit of sandstone shown to carry gold, which had been located under the placer mining laws, was a lode or placer formation. The Department, in that case, at page 297, said:

“From the reasoning of the authorities cited, it follows that sand-rock or sedimentary sandstone formation in the general mass of the mountain bearing gold, such as is here disclosed by the evidence, is rock in place bearing mineral and constitutes a vein or lode within the purview of the statute, and can be located and entered only under the law applicable to lode deposits. The Department is convinced that the deposit described in the testimony in this case falls well within the category of lode deposits under the mining statutes, and that such a deposit cannot lawfully be appropriated or patented under those portions of the statutes which apply to placer claims.”

The mineral-bearing sedimentary deposits, held in the cases above cited to be lodes or veins within the meaning of the mining laws, were valuable on account of the metallic minerals therein contained. In *Webb vs. American Asphaltum Mining Company*, *supra*, decided in 1907, it was, however, held, in substance, that the clause "other valuable deposits," used in section 2320, Revised Statutes, includes non-metalliferous as well as metalliferous deposits, and hence that a deposit of asphaltum in lodes or veins in rock in place may be entered and patented under section 2320, and may not be secured by means of placer claims under section 2328, nor the act of February 11, 1897, (29 Stat., 526), regarding the entry of lands containing petroleum and other mineral oils. Citing and following this decision, the Department, in the case of *Utah Onyx Development Company* (38 L. D., 504), held that valuable deposits of onyx occurring in well-defined fissures, with clearly marked hanging and foot walls of limestone, are subject to appropriation only under the lode mining laws. In the earlier case of *Henderson, et al, vs. Fulton*, *supra*, the Department said, at page 663:

"Some of the authorities hold the view that only minerals of the metallic class are within the statutes relating to veins or lodes, but the great weight of authority is the other way; and the Department is of opinion that the latter is the better view. That the statute is broad enough to embrace minerals of the non-



metallic as well as the metallic class, wherever found in rock in place, was distinctly held after careful consideration and full discussion in the case of Pacific Coast Marble Company vs. Northern Pacific Railroad Company (25 L. D., 233, 241, 243.) See also Lindley on Mines, Secs. 86, 323; 1 Snyder on Mines, Sec. 337.)

It is immaterial, therefore, whether a deposit bear minerals of a metallic or non-metallic nature; if a mineral deposit exist in vein or lode formation—that is to say, if it be in place in the general mass of the mountain, it is, whether the mineral it bears be metallic or non-metallic, subject to disposition only under the provisions of the lode mining laws.

From the foregoing, it is clear to the Department that a deposit of phosphate rock, such as that herein-above described, confined, as it is shown to be, between well defined boundaries, constitutes a lode or vein of mineral-bearing rock in place within the general mass of the mountain, and hence is subject to disposition only under the provisions of the lode mining laws.

This location, so far as the record discloses, was made in entire good faith, and there is no suggestion of anything that might in any wise invalidate the claim, the location, and, in fact, the entry, having been made before the executive withdrawal of July 1, 1910.



In the absence of other objection, therefore, the claim will be passed to patent as located and entered.

Very respectfully,

(Signed) SAMUEL ADAMS,

First Assistant Secretary.

## IN RE LORINE LODE MINING CLAIM.

### MEMORANDUM.

The subject under consideration is whether the so-called veins or lodes included within the locations hereinafter described possess the elements of rock in place bearing one or more of the minerals specified in section 2320, United States Revised Statutes, or some other mineral that would be embraced within the added words "other valuable deposits."

September 13, 1905, Charles C. Jones located what is described as the Lorine lode, situated in Sec. 8, T. 11 N., R. 8 E., S. L. M., Rich County, Utah.

In the location certificate thereof it is recited that said location was made upon a "bedded vein or deposit of phosphate rock in place."

June 19, 1907, the Bradley Brothers, being then the owners of said Lorine lode, filed in the Salt Lake City (Utah) land office their application for patent for said claim, and after the usual proceedings as to the notice, etc., as required by the statutes of the United States relating to the patenting of lode min-

ing claims, said Bradley Brothers on October 24, 1907, made mineral entry 3923 for their said Lorine lode mining claim. The records of this mineral entry disclose the fact to be that at no time prior to the time when entry was made as aforesaid for this claim was there ever filed any protest or adverse claim against the premises included within this entry.

In a letter dated January 11, 1908, this office directed the local officers to notify the entrymen to have the surveyor who made the survey of the claim submit a verified report, certified by the United States surveyor-general of Utah, showing the nature of the deposit, its formation, and mode of occurrence.

Following this letter there was filed in the local office on the 23d of March last, a corroborated protest of the San Francisco Chemical Company, protesting against the issuance of patent to said Bradley Brothers for said Lorine lode, under the laws relating to lode mining claims.

In a general way the protest sets forth, first, that the deposits embraced within the exterior boundaries of the Lorine lode mining claim are placer in character and are not veins of quartz or other rock in place; protestants further say that they are interested in the subject-matter of the determination and classification of the valuable deposits embraced in the aforesaid lode mining claim, for the reason, principally, that they have made certain placer locations within the same locality where the

said Lorine lode claim is located. Protestants further state in said protest that they are already owners of a certain placer known as the Waterloo placer, whose geological formation is identical with that included within the boundaries of said Lorine lode. They call attention to the fact that prior to the time patent was issued for the said Waterloo placer, a memorandum was written respecting the formation of deposit included within its exterior limits, and that in said memorandum said deposits were regarded as coming within the purview of the laws regarding placer claims, and they ask that a similar ruling be made with respect to the deposits within the said Lorine mining claim.

March 24, 1908, the local officers forwarded the aforesaid protest, and in their letter of transmittal stated that in view of the allegations made by the protestant they would respectfully recommend that a hearing be ordered to determine the character of the land involved, as to whether same is lode or placer.

Neither the protestant nor the protestees have asked for a hearing, and it is not thought necessary to order one, in view of the large expense to which the parties may be involved therein, and for the further reason that it is believed that sufficient data are before the writer to enable him to determine intelligently whether the Lorine lode mining claim may be approved for patent as a lode mining claim or otherwise.

In addition to certain plats connected with the Waterloo claim, the only evidence submitted by the protestant consists of transcripts of certain testimony submitted in June and September, 1905, before a certain examiner in connection with an adverse suit of Charles C. Jones against William S. Goodfellow and others, removed to the United States circuit court for the ninth district, in and for the district of Idaho, southern division, and involving an adverse claim filed by the lode claimant against the said Waterloo placer.

The testimony set forth in said transcripts has been heretofore gone over very carefully, and epitomized in office memorandum of December 12, 1905, approved by the honorable commissioner, W. A. Richards, under date of December 27, 1905.

An examination of the protest shows that the protestant alleges no surface conflicts with the ground entered under the Lorine lode mining claim, and, further, said protest shows that the protestant does not allege or claim any adverse interest in the ground involved in said Lorine lode entry. With regard to this protest, and particularly so much thereof as refers to the said Waterloo placer, it is to be observed that the formation of the deposit contained within the said Waterloo placer is not now under consideration, and, further, that when it was under consideration it was specifically stated in said office memorandum of December, 1905, that while the deposit covered by the Waterloo might, without serious objection, be located and patented

as lodes, it was perhaps better to consider them as placer deposits, thus conforming to the view of geologists. It may be stated in this connection that at and long prior to the time of the preparation of said memorandum of December 12, 1905, all of the entries for lands embracing phosphate deposits related to placer locations, and, further, that at the time of the entry of the land included within the said Waterloo placer limits there was not then existing any protest or adverse claim against the same. In other words, it was specifically stated in said office memorandum that the decision applied only to the Waterloo placer, and was not to be considered as an established precedent.

The Bradley Brothers have also made other mineral entries for mining claims in the locality where the Lorine lode mining claim is situated, viz., mineral entry 3934, for the Shoshone and other lodes, and mineral entry 3932, for the Cherokee and other lodes. It appears also that they have filed in said local land office an application, No. 4272, for the Arickaree and other lodes, also located in the same locality where the Lorine and the above mentioned locations are situated.

The Lorine lode entrymen have also submitted a transcript of the testimony hereinbefore referred to as having been taken in connection with the adverse suit removed to the United States circuit court; besides this they have submitted a transcript of certain testimony which was taken December 20, 1907, at Salt Lake City, Utah, in the matter of the

protest of the State of Utah against said Bradley Brothers, involving the said Arickaree and other lodes.

Besides this the said Bradley Brothers have submitted a plat showing thereon that they have made a number of locations in this vicinity for phosphate lode mining claims, the same being in the shape of two parallel shoestrings, extending for, possibly, 1 or 2 miles.

Numerous photographs also have been submitted depicting the physical conditions in this country and of certain other locations made upon and in behalf of the said Bradley Brothers, and samples of ore alleged to have been taken from these claims have also been submitted.

The Bradley Brothers have also submitted a report made by Mr. Guy Sterling, the mineral surveyor who surveyed their said Lorine lode mining claim, which report is in response to said office letter of March 6, 1908.

The following extracts are taken from said Sterling's report, which have been submitted to sustain the protestees' contention that their said Lorine lode should be patented as a lode-mining claim:

"The said deposit consists of a series of bedded veins of rock containing varying proportions of calcic phosphate. The individual veins of the series of veins vary in thickness from a few inches to 10 or 12 feet. Only a portion of the veins contain rock sufficiently rich in calcic phosphate to be of

commercial value, and only a portion of the veins are thick enough to be profitably mined, even when the contained proportion of calcic phosphate is sufficiently high. \* \* \*

The variety (of calcic phosphate) found in the veins of this lode location is massive in form; that is, uncrystallized (phosphorite). Physically the higher grade vein rock occurring in the veins of the Lorine lode location is hard, its color is grayish bluish black. It is homogeneous in appearance and is composed of small oolitic rounded grains cemented together by an extremely thin film of calcite and silica. \* \* \* Taken as a whole, the above-mentioned series of bedded veins of phosphate rock, and also each of the individual or separate veins of the series lies between, are conformable to and bounded by walls of rock, which wall rock is generally limestone, but often is a very silicious or cherty limestone or a soft sandstone or a shale or quartzite.

Describing the physical conditions appearing in the tunnel, the report further says:

"Beginning at the limestone hanging wall occurring in the face of the Lorine tunnel and going toward the western or foot wall side of the series of veins as far as the formation has been exposed, the walls and veins occur as follows:

"First. Hard siliceous dark blue limestone hanging wall.

"Second. Vein of good grade phosphate rock, dark brown in color, 9 feet thick.



Third. Thin stratum or wall of shale.

"Fourth. Vein of high grade, blue-gray phosphate rock, 4 feet in thickness.

"Fifth. Thin wall of shale.

"Sixth. Vein of good grade, dark-brown phosphate rock, 14 feet thick.

"Seventh. Wall of black chert, practically pure silica, 2 feet thick.

"Eighth. Wall of dark limestone, 4 feet thick.

"Ninth. Vein of blue-gray, high-grade phosphate rock, 2 feet thick.

"Tenth. Wall of yellowish limestone,  $2\frac{1}{2}$  feet thick.

"Eleventh. Vein of blue-gray, high-grade phosphate rock, 8 inches thick.

"Twelfth. Wall of grayish siliceous limestone, three feet thick.

"Thirteenth. Vein of black, good grade phosphate rock, exposed for about 4 feet of its thickness, and foot wall not shown.

"The veins and walls as above described and represented in the above-mentioned sketch conform to each other throughout the portion of the series of veins shown, and have a clearly defined dip of 53 degrees E. and strike of S. 17 degrees W.

"On the surface, immediately above the Lorine tunnel, the position of the veins is indicated by detached pieces of phosphate rock lying on the surface, along and on the apex of the veins. By these indications the course of the veins may be traced from the tunnel through the Lorine lode location,

both southerly to its southerly end line and northerly to its northerly end line.

“The series of veins of phosphate rock existing within the Lorine lode location may be followed by surface indications along the apex of the series of  $2\frac{1}{2}$  miles northerly, and for about 10 miles southerly from the Lorine lode location.

“The most striking features of these surface indications is the frequent prominent and often precipitous outcrop of the hanging and foot wall formation of the series of veins, while between these walls the position of the veins is readily located by the outcropping of individual veins of phosphate rock and by large quantities of detached pieces of the phosphate rock lying on the surface along the apex of the series of veins.

“The line of demarcation between the veins of phosphate rock and their walls of limestone, shale, or chert is sharply defined and distinct. In other words, the vein rock terminates and the wall rock begins abruptly, and the distinction between the phosphate rock of the veins having commercial value due to its contained percentage of phosphorus and the wall rock having no commercial value is readily determined by visual inspection.

“The limestone strata forming the walls of the bedded veins of phosphate rock and the veins themselves are sedimentary in origin, and belong to the Upper Carboniferous formation.

“The existence of the veins of phosphate rock may be accounted for by supposing that a bed of

limestone originally occupied the position of one of the veins of phosphate rock, and that the bed of limestone was covered, while in its original horizontal position with a bed of animal and vegetable remains, shells, excrement, and other material containing free phosphoric acid and soluble phosphate. Water percolating from above through this mass carried the phosphoric acid and soluble phosphates down to the underlying bed of limestone. By the contact of the phosphoric acid and the soluble phosphates with the limestone chemical action was brought about, resulting in the formation of a bed of calcic phosphate, where originally was a bed of limestone. In the course of time other beds of limestone and calcic phosphate were successively and alternately deposited one above the other through the entire series of veins.

“Consolidation and concentration of the beds of calcic phosphate thus formed were brought about by the pressure of subsequently deposited formation. After being continued for an indefinite period this process was followed by a series of uplifting and folding movements which finally brought the veins or beds of phosphate rock and their limestone walls to their present position and condition.”

The facts as regards locations, patent proceedings, etc., of the claims in mineral entries 3932 and 3934 are quite similar to those in said M. E. 3923. So also as respects the protests filed against said mineral entries 3932-3934, and whatever is said in the course of this discussion respecting the

Lorine lode will apply with equal force to the locations included in the other entries referred to herein.

So far as mineralogical and geological conditions are concerned, a similar report has been made by Mr. Sterling with respect to the mining claims in said mineral entries 3932-3934.

The attorney for the Bradley Brothers has submitted a brief in support of their contention that the claims should properly be classified as lode mining claims. In the introductory part of his brief counsel for the entrymen states that in the section of the country where these claims are situated there seems to exist a diversity of opinion among lawyers, acting for proposed locators, as to whether the location in this field should be as lode or as placer locations, from which it might be inferred that it was expected that the decision in the several mineral entries under consideration respecting whether they are lode or placers would forever set at rest the chaotic state of affairs in this regard and make certain that all future phosphate locations in this territory must be made in conformity to the views herein expressed. It is not intended that this opinion shall have any such effect, and it could not have any such effect, even if it were so intended. This opinion is designed to settle nothing but the matter involved in these entries, namely, whether they may be patented as lode-mining claims under section 2320 of the United States Revised Statutes relating to lode-mining claims.

In almost any mineralized section lodes and placers, as understood and defined both by the courts and the land department, will be found frequently in conflict with each other.

The mining laws, section 2333, United States Revised Statutes, recognized this situation and have made provision therefor.

All future entries for mineral lands in this locality will of necessity have to be considered and adjudicated upon the facts found in connection therewith and the law applicable thereto, precisely as is now being done in the case at bar, and as would be done in the courts in any adverse suit wherein was brought in issue the question whether or not the mineral formation in the land in controversy should be adjudged to be lode or placer in character.

The evidence above referred to as having been submitted in the Waterloo adverse case and the report of Mr. Sterling shows that the deposits embraced in the Waterloo placer and in the locations embraced in the entries under consideration are of practically the same geological formation. Skillful witnesses of undoubted integrity have submitted different views respecting the classification of the phosphate deposits in this section of our country. Much that has been testified to by the various witnesses for both sides is of a speculative nature. They have testified, also, to practically the same set of facts, but out of this compound of fact and opinion it is believed that there has been produced sufficient

evidence to show that the locations embraced in these entries may properly be approved for patent as lode mining claims. By section 2318 it is provided that in all cases lands valuable for minerals shall be reserved from sale except as otherwise expressly directed by law, and by section 2319 it is provided that all valuable mineral deposits in lands belonging to the United States are declared to be free and open to exploration and purchase and the lands in which they are found to occupation and purchase by citizens of the United States, etc.

In the case of *Gary vs. Todd*, (18 L. D., 58) it was held by the department that land chiefly valuable for phosphate deposits was mineral in character, and the same view was taken by the department in the later departmental decision reported in 26 L. D., 600, in the case of the *Florida C. & P. R. R. Co.*

Lode claims are referred to in section 2320, United States Revised Statutes, in part as follows:

“Mining claims upon veins or lodes of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits.”

Placer claims are referred to in the mining laws, section 2329, in the following language:

“Claims usually called placers, including all forms of deposit excepting veins of quartz or other rock in place, shall be subject to entry and patent under like circumstances and conditions and upon similar proceedings as are provided for in vein or lode claims.”



In the case of *Henderson vs. Fulton*, reported in 35 L. D., 663, it was held that the foregoing provisions of the statute were broad enough to embrace minerals of the non-metallic (such as the mineral here under consideration), as well as metallic class, wherever found in rock in place. This view was also taken in the United States circuit court of appeals for the eighth circuit in the case of *Webb vs. American Asphaltum Company*, decided November 16, 1907, concerning a lode or vein of asphaltum of the kind commonly called "gilsonite."

"A lode is in place when it is enclosed and embraced in the general mass of the mountain and fixed and immovable in that position, and it is not material that the vein matter is loose and disintegrated. (*Stephens vs. Williams*, 1 Mor. Mining Rep., 559; *Leadville M. Co. vs. Fitzgerald*, 4 id., 387; *Stephens vs. Murphy*, id.)

"'Country' or 'country rock' is used to designate the surrounding mass of rock in which lodes or veins of mineral are found; *Stephens vs. Williams*, supra.

"Cinnabar is not found in any fissure of the earth's crust or in any lode as defined by geologists, but the definition of the term lode must apply to all deposits of all the metals named in the act of congress and includes cinnabar, if it apply to a deposit of any of them. (*Eureka C. M. Co. vs. Richmond M. Co.*, 4 Saw., 311.)

"A lode is any zone or belt of mineralized rock lying within boundaries clearly separating it from



the neighboring rock. It includes all deposits of mineral matter found through a mineralized zone or belt coming from the same source, impressed with the same forms, and appearing to have been created by the same processes. (Field J., *id.* 312; *Diablo M. & M. Co. vs. Callison*, 6 Saw., 444.)

“The vein must be continuous only in the sense that it can be traced by the miner through the surrounding rocks. Slight interruptions of the mineral-bearing rock are not alone sufficient to destroy the identity of the vein; nor would a short partial closure of the fissure have the effect to destroy the continuity of the vein, if a little farther on it appeared or recurred again, with mineral-bearing rock in it. (*Cheesman vs. Shreve*, 40 Fed. Rep., 793.)

“A vein or lode is a body of mineral or mineralized rock in place within defined boundaries in the general mass of the mountain. (*Cheesman vs. Shreve*, *supra*, and *Stephens vs. Williams*, 1st McCreary, 487.)

“A vein, lode, or ledge (used interchangeably in the mining laws) is a continuous bed of mineralized rock lying within any other well-defined boundaries of the earth’s surface, and under it, and these terms are used in the acts of Congress, as applicable to any zone or bed of mineralized rock lying within boundaries closely separating it from the neighboring rock. It is any class of deposits of mineral matter coming from the same source, impressed with the same forms, and appearing to have been created by the same process. (*Stephens vs.*

Williams, *supra*, and *Iron S. M. Co. vs. Cheesman*, 116 U. S., 534.)

“To constitute a vein it is not necessary that there be a clean fissure filled with mineral as it may exist when filled in place with other matter, but the fissure must be formed and be well defined with hanging and foot walls. (*Cons. Wyo. G. M. Co. vs. Champion M. Co.*, 63 Fed., 540.)

“A lode or vein is a body of mineral or mineral-bearing rock within defined boundaries in the general mass of the mountain. (*Iron Silver M. Co. vs. Mike & Starr, etc., M. Co.*, 12 Sup. Ct. Rep., 543-545.)

“Where well-defined boundaries exist, very slight evidence of ore within such boundaries will prove the existence of a lode.” *Id.*

Numerous other authorities might be cited with respect to what constitutes a lode within the meaning of the mining laws, but it is thought unnecessary to make further reference to them, considering the extended opinion written along this line in the said case of *Henderson vs. Fulton*.

There is no doubt but that phosphate is a mineral and as such may be patented under the United States lode mining laws. Departmental authorities cited already prove this, and no longer make it a question. I submit that the evidence which has been considered in connection with this case, and the report of Mr. Sterling particularly, show that the rock bearing this mineral is in place and has well-defined boundaries in the general mass of the

mountain where it is located, and that it may properly be approved for patent as a lode mining claim.

I recommend that Salt Lake City mineral entries 3923, 3932, and 3934 be approved for patent as lode claims.